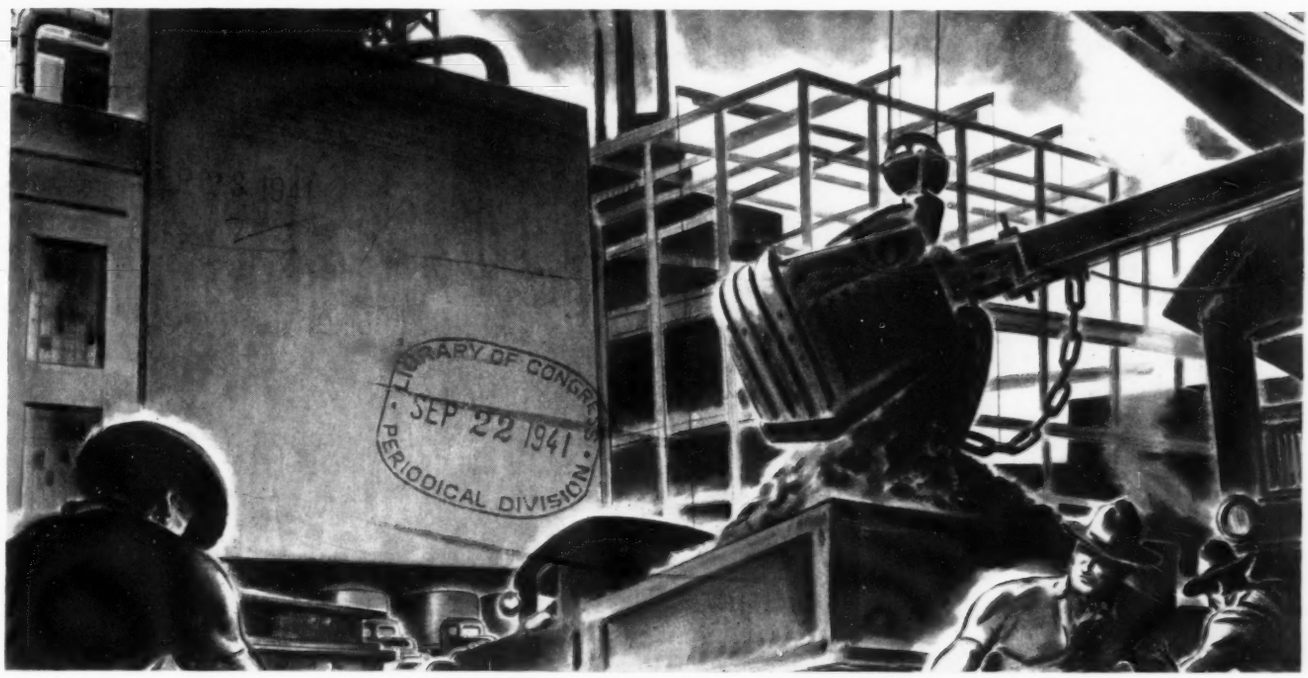
SEPT. **COTTON** 1941

SERVING THE

Textile Industries

1st Copy to Periodical Div. SEP 22 1941



☆ ☆ **PARTNERS IN TEXTILES** ☆ ☆

Day by day, America's need for textile production grows more pressing. The demands of national defense, coupled with increased purchases by consumers, are straining the capacity of textile mills everywhere.

In these times especially, it is imperative that any project involving plant expansion or improvements, whether large or small, be entrusted to an organization with the full knowledge of textile engineering and construction requirements that comes only from long, successful service in this highly specialized field.

In serving some of the nation's outstanding manufacturers,* Robert and Company has directed textile construction comprising every type of layout. Today, our staff stands ready to serve *your* needs regardless of their scope with the same efficiency and exactness that have characterized our work during many years of close partnership with the textile industry.

*Clients whom we have served recently:

Cluett-Peabody & Company, Inc.
The Linen Thread Company
Swift Manufacturing Company
Marshall Field & Company
Pepperell Manufacturing Company
Peerless Woolen Mills
Tallassee Mills
The Thomaston Cotton Mills
Tubize Chatillon Corporation
West Point Manufacturing Company

ROBERT AND COMPANY
ATLANTA INCORPORATED GEORGIA
Architects and Engineers

Unlock the Cash

Now In Your Accounts Receivable

The cash you need may now be "locked" in your own accounts receivable! Commercial factoring provides the "key" for its release.

You are provided with cash as you make your shipments . . . yet you continue to extend regular terms to your customers. Commercial Factors Corporation assumes all credit losses and collection expense . . . bookkeeping and office expenses are reduced as well.

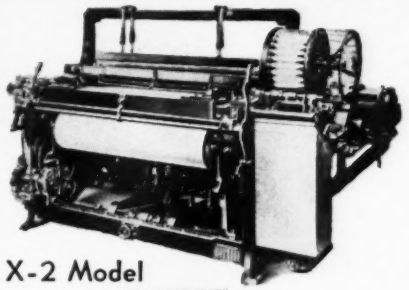
The facts are well worth learning—and they are yours for the asking. Just write today.

COMMERCIAL FACTORS CORPORATION

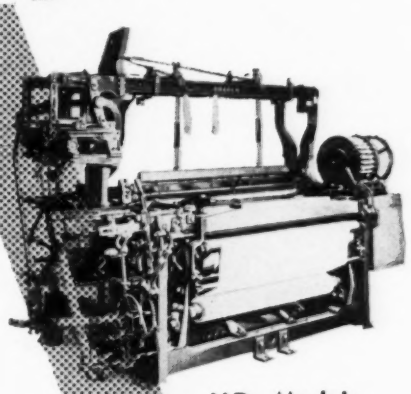
Fred'k Victor & Achelis, Inc.	Schafer, Schramm & Vogel	Peierls, Buhler & Co., Inc.
Established 1828	Established 1838	Established 1893

TWO PARK AVENUE, NEW YORK

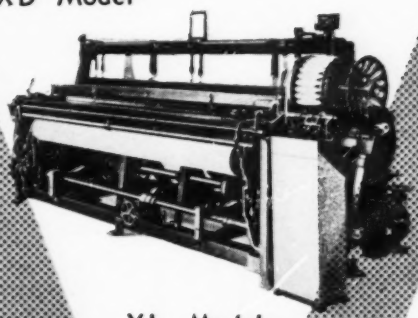
Draper Looms Working on the Defense Program



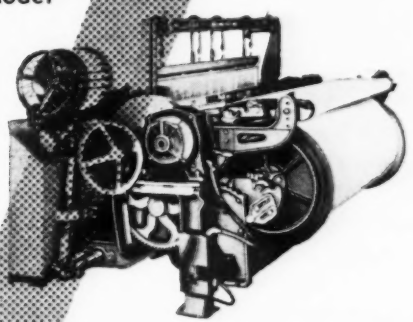
X-2 Model



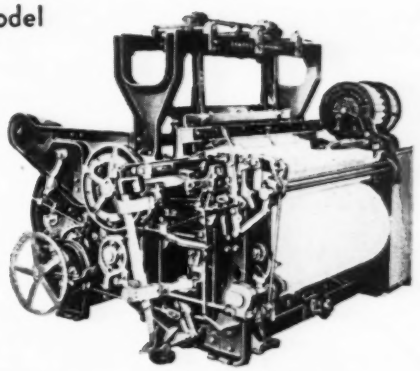
XD Model



XL Model



XP Model



XU Model

Defense Fabrics Being Woven on Draper Looms

- Poplins—for Uniforms
- Byrd Windbreaker Cloth
- Human and Flare Parachute Cloth
- Material Parachute Cloth (High Tenacity Rayon)
- Parachute Uniform Cloth
- Twills for Navy Uniforms
- Balloon Cloth for Sleeping Bags (Iceland and Greenland)
- Lawns for Treated Raincoats
- Airplane Cloth
- Mechanical Cloth for Rubber Boats for Airplanes
- Worsted Uniform Cloth
- Denims for Fatigue Uniforms
- Broadcloth for Officers' Shirts
- Tracing Cloth (20 Acres for Plans for One Destroyer)
- Bandages and Surgical Cloth
- Shelter Tent Duck
- Army Duck and Heavy Duck
- Sheeting
- Mosquito Netting
- Spun Glass Cloth
- Typewriter Cloth

DRAPER CORPORATION

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Entered as second-class matter at the Post Office, Dalton, Ga., under the Act of March 3, 1879.

Volume 105. Number 9.

OIL THAT "WON'T BE THROWN"

NEW freedom from spoilage due to oil-throw, fewer lubrications, lower maintenance costs. These are *proven* results of lubricating top-rolls, looms and other equipment with lubricants *that stay on.*

Scores of mills are enjoying higher output of spotless yardage . . . by lubricating with *TEXACO STAZON.*

Texaco Stazon stays on bearing surfaces . . . resists thinning out, creeping, splattering. It assures more efficient lubrication with fewer applications.

The outstanding performance that has made Texaco preferred in the fields listed in the panel has made it preferred also by textile mills everywhere.

These Texaco users enjoy many benefits that can also be yours. A Texaco Lubrication Engineer will gladly cooperate . . . just phone the nearest of more than 2300 Texaco distributing plants in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York, N. Y.

THEY PREFER TEXACO

★ More Diesel horsepower on streamlined trains in the U. S. is lubricated with Texaco than with all other brands combined.

★ More locomotives and cars in the U. S. are lubricated with Texaco than with any other brand.

★ More revenue airline miles in the U.S. are flown with Texaco than with any other brand.

★ More buses, more bus lines and more bus-miles are lubricated with Texaco than with any other brand.

★ More stationary Diesel horsepower in the U. S. is lubricated with Texaco than with any other brand.

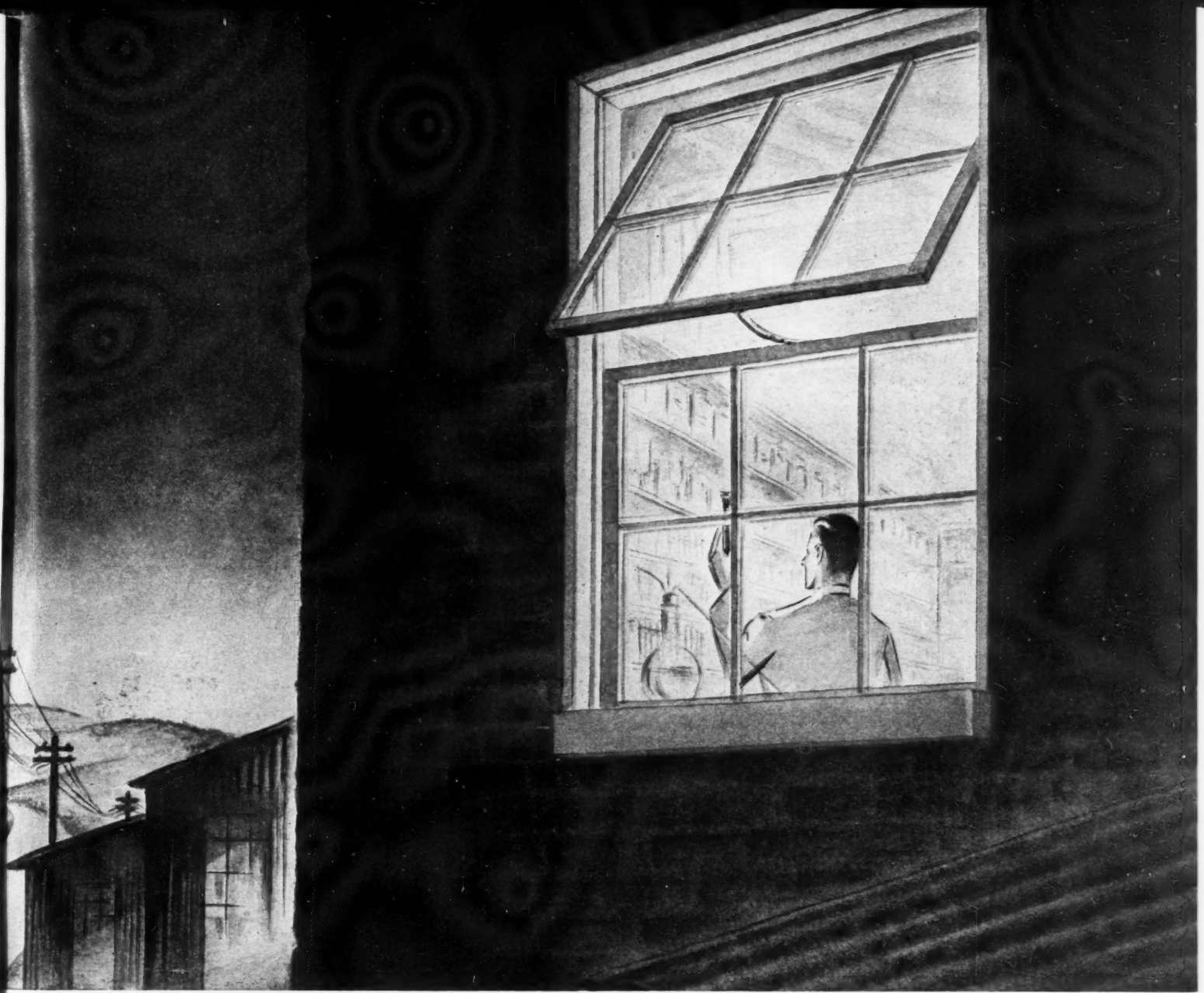
TUNE IN: "Treasury Hour—Millions for Defense." All-Star Radio Program. Every Wednesday Night, CBS. 9:00 E.D.T., 8:00 E.S.T.; 8:00 C.D.T., 7:00 C.S.T.; 6:00 M.S.T.; 5:00 P.S.T.

★ **RETURN METAL DRUMS PROMPTLY... thus helping to make present supply meet industry's needs and releasing metal for National Defense.** ★

TEXACO REG T.M.

TEXACO Lubricants

FOR THE TEXTILE INDUSTRY



FOR THE DURATION . . .

Laboratory lights burn far into the night as research goes steadily forward to improve the quality of Warner Chemicals. In our plants the hum of production is punctuated by the sounds of modernization and construction work.

We sincerely believe that our research and modernization programs will ultimately enable us both to fill defense needs and more fully meet the requirements of our regular customers. In the meantime, we are particularly desirous of rendering technical help in the most efficient use of Warner Chemicals.

WARNER CHEMICAL COMPANY

Division of

WESTVACO CHLORINE PRODUCTS CORPORATION

Chrysler Building, New York City
Woodside Building, Greenville, S. C.

It delivers the Goods
on pivoted-base drives!
GTM-Specified
GOODYEAR COMPASS BELT
Truly Endless
for pivoted-base short center textile drives
Continuously wound layer of stretchless, endless, rope-cord carries the load. It has no splice!
E
S
Three-ply rubberized elastic envelope, starting at "S" and ending at "E," provides a DOUBLE COVER on pulley side to take the wear.

LEADING manufacturers of pivoted-base short center textile drives recommend the Goodyear COMPASS belt for this tough service —for these four important reasons:

The COMPASS belt has the lowest inelastic stretch of any belt made, insuring a constant relationship between pivot point and belt strands.

It is truly endless; has no splice to fail from the constant strain of flexing around short centers.

It has extremely high flex-life because the load-carrying element is built in one plane. There are no plies to separate; no inter-planer distortion.

The patented COMPASS balanced construction insures true running, keeps the belt from "traveling" off the pulleys.

These exclusive features explain the remarkably long service this mill-proved belt is giving on these difficult drives. Let the G. T. M. —Goodyear Technical Man—give you the full story. To bring him to your mill, write Goodyear, Akron, Ohio, or Los Angeles, California — or phone the nearest Goodyear Mechanical Rubber Goods Distributor.

THE GREATEST NAME IN RUBBER

GOODYEAR

BELTS
MOLDED GOODS
HOSE
PACKING
Made by the makers of Goodyear Tires

Compass—T. M. The Goodyear Tire & Rubber Company

In a stirring message directed to the people of the United States, England's Winston Churchill said, ***"Give us the tools and we will finish the job"!***

That call for "tools" has echoed down the halls of industry all over America.

The Textile Industry says, "Give us the tools . . . " and that call is directed to us . . . to Whitin Machine Works and to the other textile machinery manufacturers.

The call is a strong one. It comes from a tremendous industry, the importance of which in the National Defense Program is demonstrated by government orders for millions of dollars worth of fabrics, to fill widely diversified requirements of our armies, our navy, and our air corps.

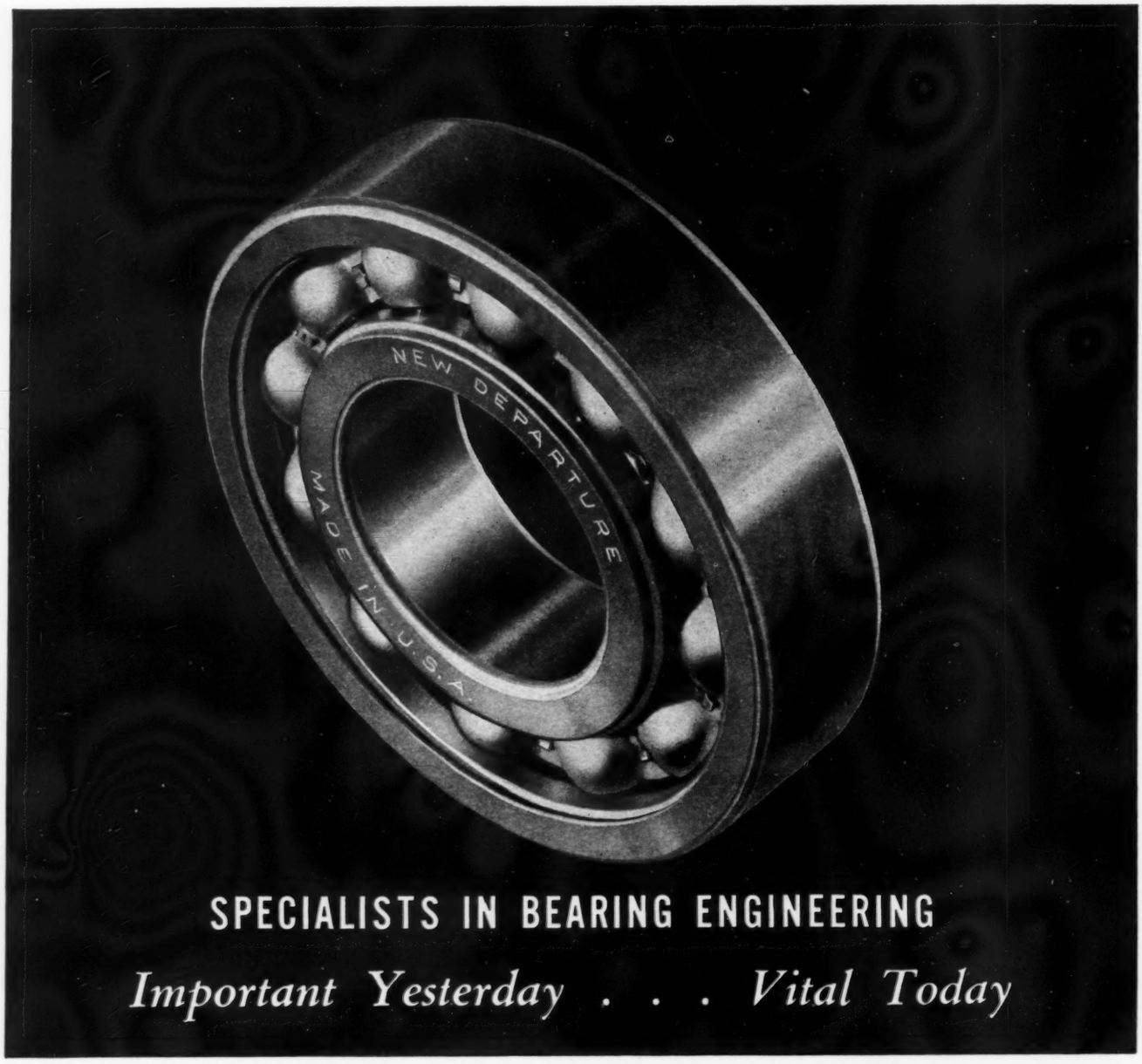
We believe the maintenance of full production in the textile mills of America is of vital importance to the National Defense Program. We shall do our part to keep the mills in full production by supplying needed machinery and repair parts insofar as it is possible for us to secure the raw material with which we must work.

It is the desire of our Government that we should accept such direct defense orders as we are equipped to manufacture. It is also *our* desire and our *duty* to do so. We are already at work on marine-type steam engines and turbines, parts for torpedoes, assemblies for machine tool manufacturers, and crank cases for airplane engines. We expect to become continuously engaged in more of this type of work during the present emergency.

But we shall not forget that we are manufacturers of textile machinery and of the parts required to keep that machinery at maximum operating efficiency.

It is a time for careful planning, sound judgement, and the subordination of personal desires. So far as the government directs, we shall control our production so that we may continue to be able to say to the Textile Industry, ***"Here are the tools"!***

Whitin Machine Works
Whitinsville Mass., U.S.A.
Charlotte, N. C.
Atlanta, Ga.



SPECIALISTS IN BEARING ENGINEERING

Important Yesterday . . . Vital Today

● There is scarcely an industry of importance today that is not making a *better* product, *faster* and with *greater efficiency* because of work done at strategic points by New Departure bearing engineers . . . experienced specialists in the design and application of anti-friction bearings.

New Departure, Division of General Motors, Bristol, Connecticut; Chicago, Detroit and San Francisco.
Nothing Rolls Like a Ball

For factory aid and shop training courses ask for the New Departure Shop Manual on the handling, mounting and maintenance of ball bearings. Data books for engineers and designers available upon request. For bearings in full size section please ask for layout folder, LF. . . .

New Departure

BALL BEARINGS FOR DEFENSE

IN THE LARGEST SPINNING ROOM IN THE WORLD THE FLOOR IS *Northern Hard Maple*

... One hundred thousand spindles in one room, at the Columbus, Ga., plant of the Bibb Manufacturing Company.

In this Company's policy of continuous modernization which impelled it to spend nearly $5,000,000 for new equipment in six years, it has not forgotten that floors, too, are important to production.

In Hard Maple, Bibb finds the answer to a floor that gives management everything needed for greatest efficiency at lowest cost.

Smooth Hard Maple is the one flooring which combines, for the comfort of the workers, warmth, resilience, and sanitation. Its lower maintenance cost and long life pay maximum return on capital investment. This floor creates no dust, doesn't catch lint, may be cleaned by brushing alone, speeds up traffic, and cuts floor costs all along the line.

Before you build or remodel, investigate **MFMA** (trademarked) Northern Hard Maple for floors, in strips or blocks. Modernization means Maple —ask your engineers.

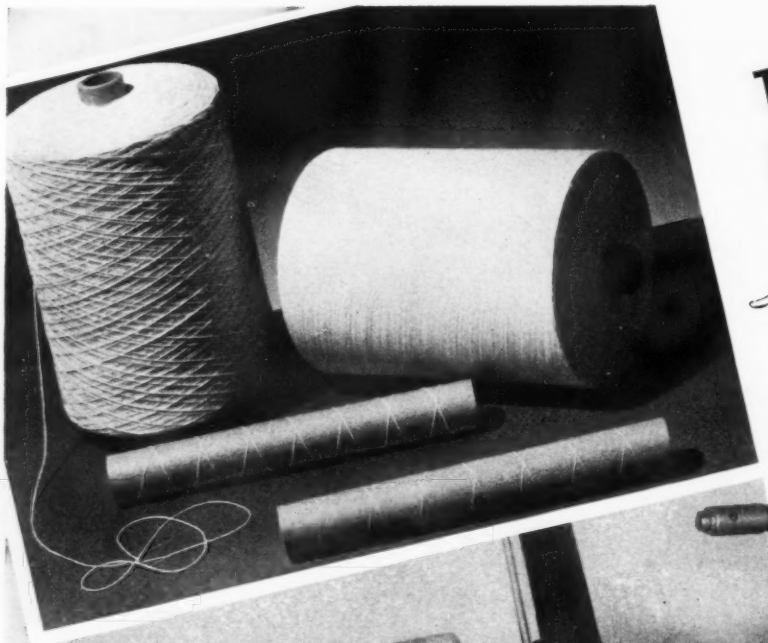
MAPLE FLOORING MANUFACTURERS ASSOCIATION
1794 McCormick Building, Chicago, Illinois

See our catalog data in Sweet's, Sec. 11/88.
Write for photographic folder on Northern Hard Maple, and leaflet on heavy-duty finishes for old or new floors.

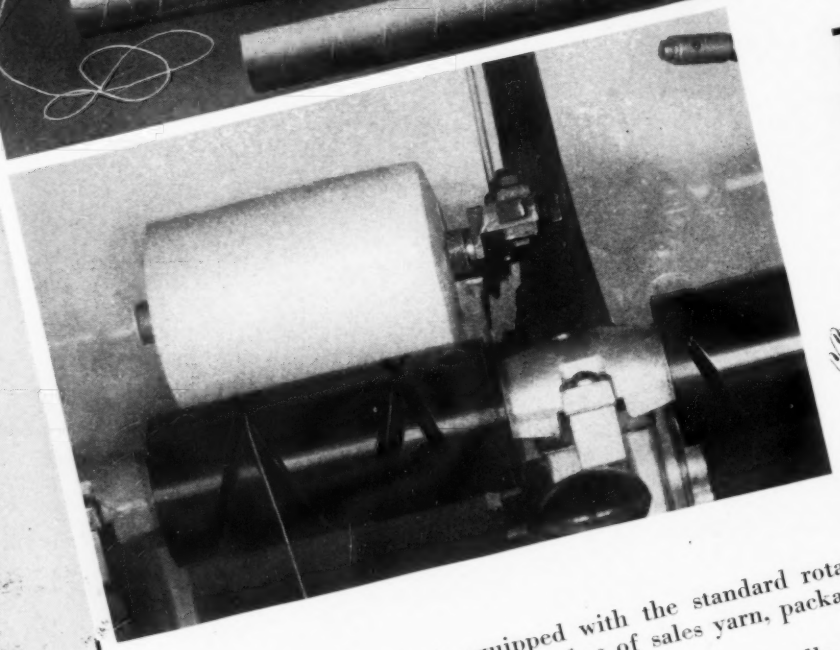
Floor *with* MFMA Maple

REG. U. S. PAT. OFF.

(NORTHERN HARD)



TUBES OF ANY YARN COUNT



THE SAME ROTATING TRAVERSE

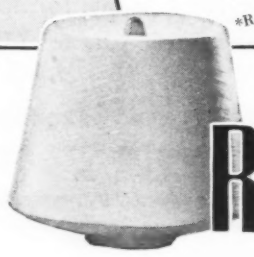
The Roto-Coner*, equipped with the standard rotating traverse for *tubing*, produces excellent parallel tubes of sales yarn, packages for dyeing, and tubes for the twister creel.

The grooves in the roll were designed to handle the *coarse* counts of yarn, which are the most difficult to wind, and this same roll is used for fine counts. Thus *all* counts are wound without adjustment of the traversing device and without necessitating a loss in speed.

Note in the top illustration that the number of winds at the start of *both* empty tubes is the same, although one tube has 12/2 ply yarn and the other 50/1. This *minimum* number of winds is standard for all tubing and will result in a saving in the time required to produce quality packages from a range of yarn counts.

*Reg U. S. Pat. Off.

See our catalog in TEXTILE YEARBOOK



ROTO-CONER

LEESONA

Reg. U. S. Pat. Off.

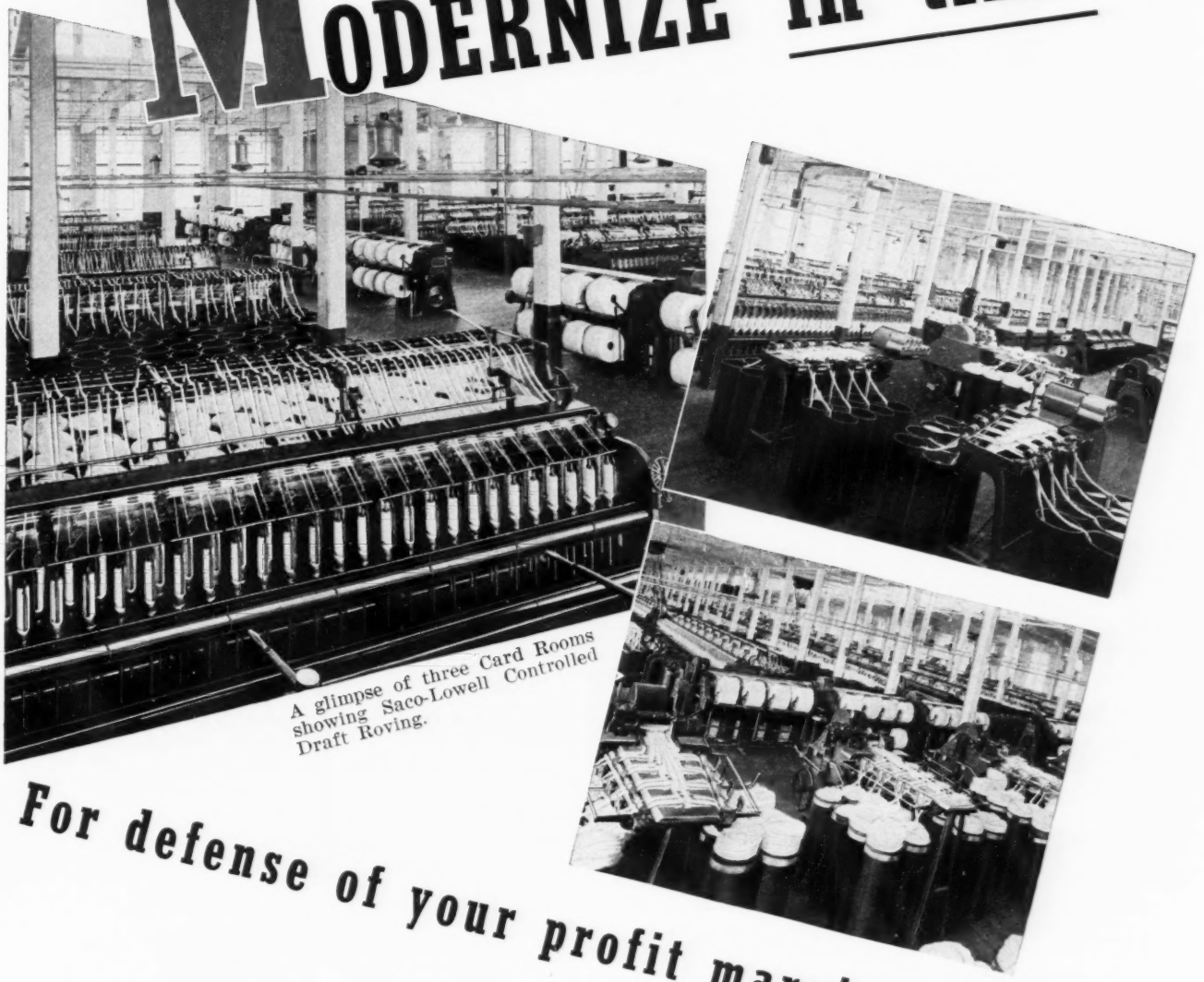
OPEN-WIND CONES FOR KNITTING

DYEING PACKAGES — PARALLEL TUBES FOR TWISTING

UNIVERSAL WINDING COMPANY P. O. BOX 1605 **PROVIDENCE, R. I.**

BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA

MODERNIZE in time...



A glimpse of three Card Rooms showing Saco-Lowell Controlled Draft Roving.

For defense of your profit margin TOMORROW

Probably, in the interest of National Defense we should not, at this time, talk of modernization and future profits, especially when the problem of "getting along" with obsolete equipment seems to be so necessary. But no time could be more opportune to lay the ground work for a thorough modernization program than today, because the defense and conservation of your earnings tomorrow will depend more than they do at this time on the competitive efficiency of all your equipment.

Machinery which is inefficient and obsolete, wasteful and costly to operate and maintain will indeed be a serious handicap when this present emergency is over.

An investigation now into the merits of Saco-Lowell Preparatory Equipment and Saco-Lowell Controlled Draft Units in Drawing, Roving and Spinning will prove an interesting and worthwhile study . . . and the data which we will prepare for you will be extremely useful as the basis for a long-range modernization program.

Our engineers will be pleased to work with you and show you how a modernization program can be planned now and started at the opportune time.

SACO-LOWELL SHOPS

60 BATTERYMARCH STREET, BOSTON, MASS. · Charlotte, N. C. Greenville, S. C. Atlanta, Ga.

VITAMIN "S-P"

. . . *for ailing* COMB BOXES

• To relieve stresses and strains in the vital part of a carding machine—the comb box—prescribe "Vitamin S-P": STA-PUT LUBRICANTS.

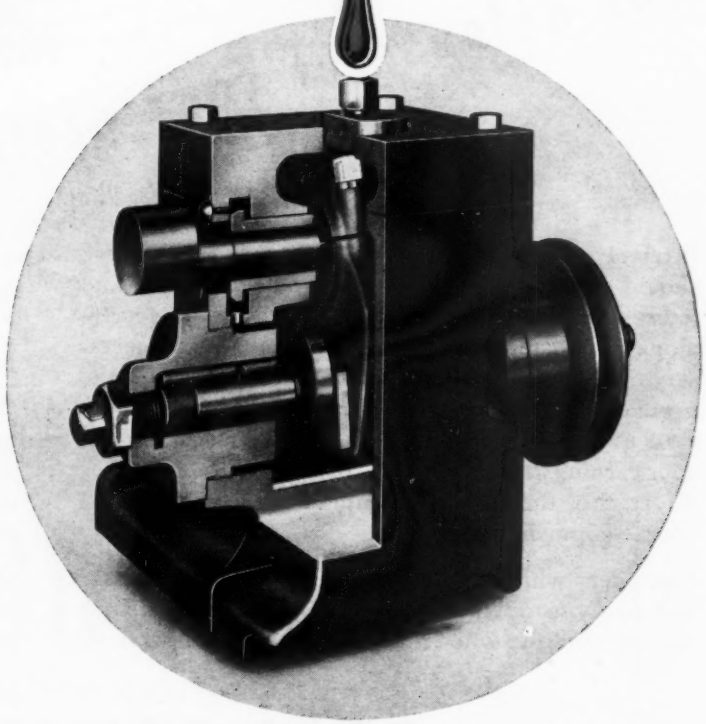
They will prolong life, reduce fevers, keep machines on the job running cooler and longer without breakdown.

STA-PUT Lubricants are so named because of their "stay-put" properties, film strength and remarkable adhesion to metal surfaces. They will keep rapidly moving parts well coated, reduce leakage, and not allow the level to fall rapidly.

Ask the Houghton Man how you can keep your machines in the pink of condition at low cost, using less oil, less often.

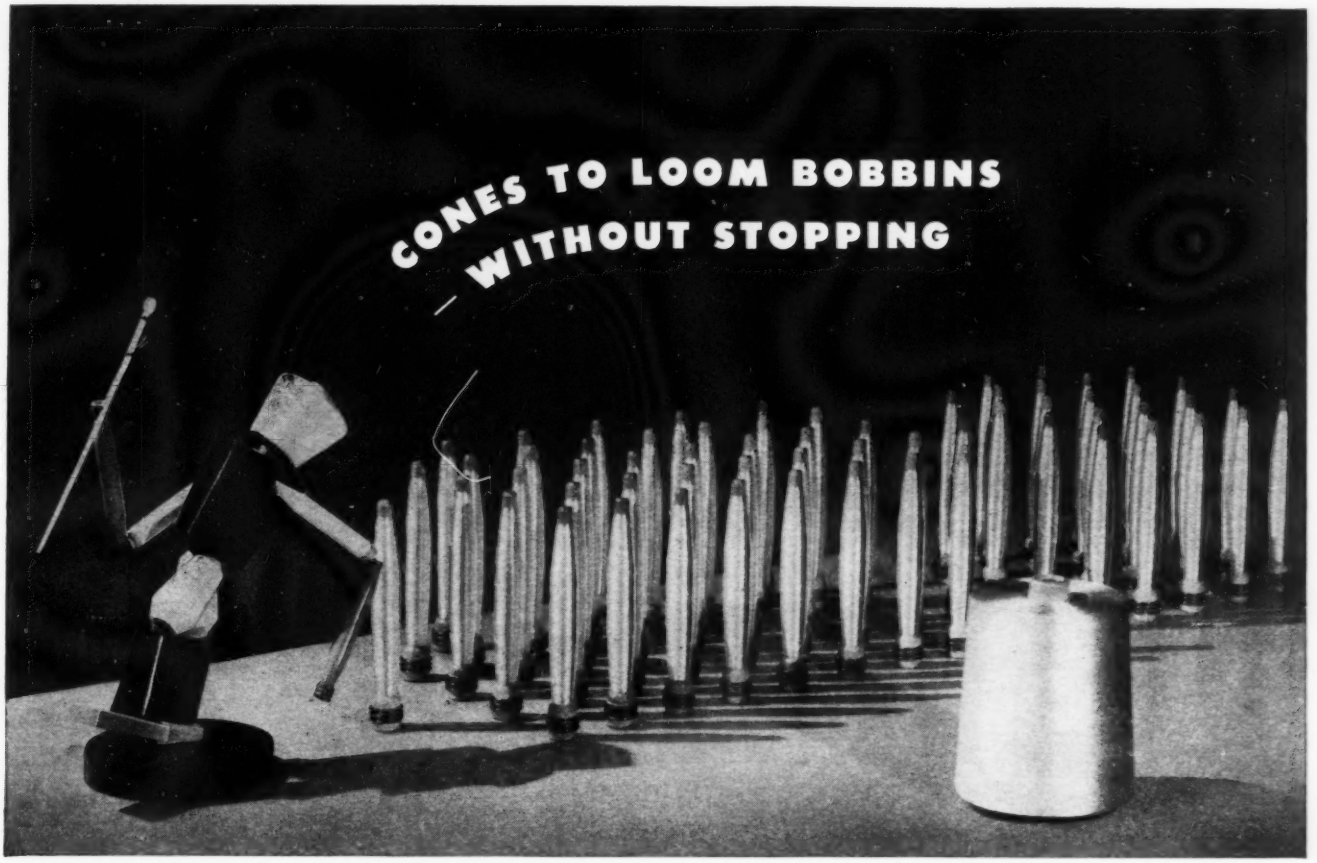
E. F. HOUGHTON & CO.
Third and Somerset Streets, Philadelphia
1301-05 W. Morehead Street, Charlotte

Less oil... Less often



Houghton's

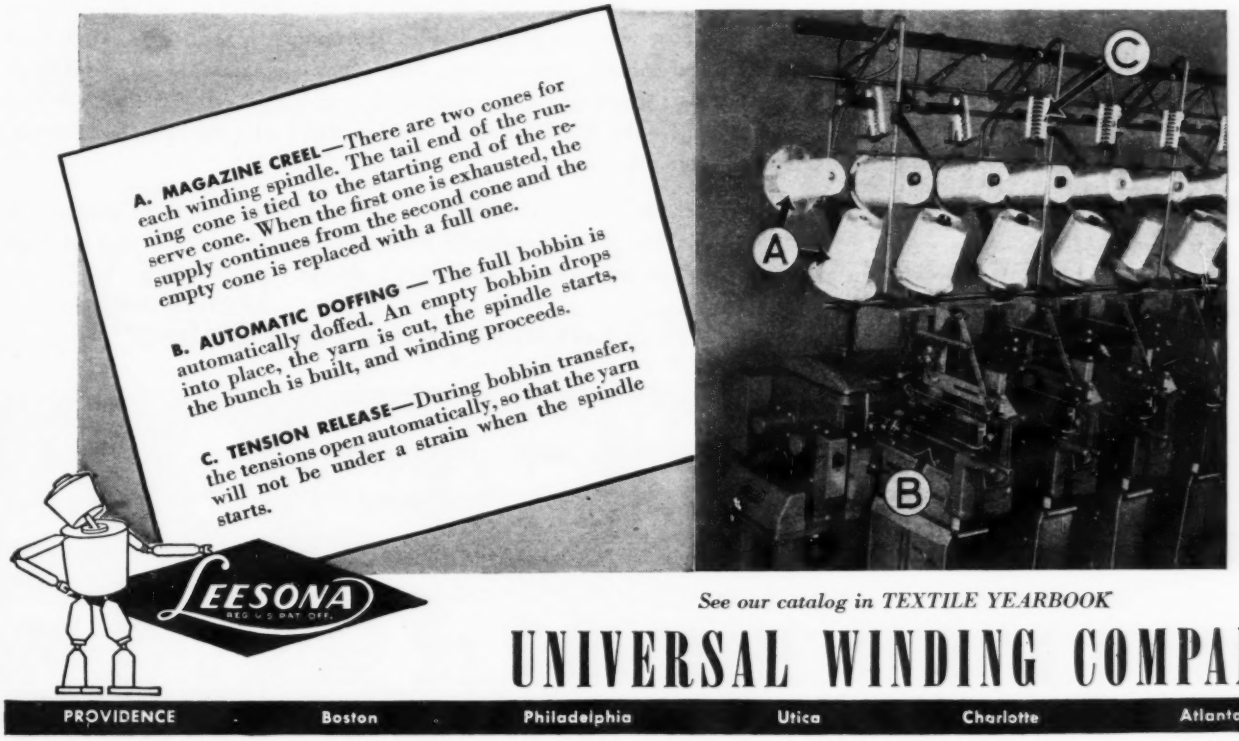
STA-PUT LUBRICANTS



The Universal Automatic (No. 99 Bobbin Winder) allows you to prepare yarn for the shuttle at high speed and without any wastage of production time.

The new type of traverse cam and gear drive produce a uniform spindle speed of approximately 5000 R.P.M. Continuous supply of yarn from the magazine creel permits the automatic mechanism to be operated continuously, thus getting maximum production from the machine.

The illustration shows 45 loom bobbins produced from a single rayon cone. Any textile fiber can be wound on the Universal Automatic, using large supply packages.

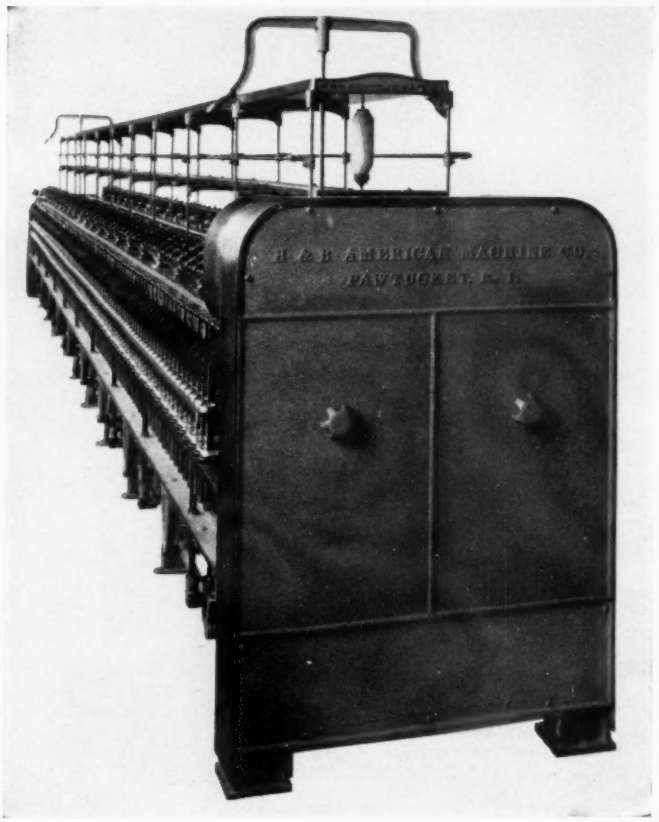

A. MAGAZINE CREEL—There are two cones for each winding spindle. The tail end of the running cone is tied to the starting end of the reserve cone. When the first one is exhausted, the supply continues from the second cone and the empty cone is replaced with a full one.
B. AUTOMATIC DOFFING — The full bobbin is automatically doffed. An empty bobbin drops into place, the yarn is cut, the empty bobbin drops the bunch is built, and winding proceeds.
C. TENSION RELEASE—During bobbin transfer, the tensions open automatically, so that the yarn will not be under a strain when the spindle starts.
C
A
B
LEESONA
REG. U.S. PAT. OFF.

See our catalog in TEXTILE YEARBOOK

UNIVERSAL WINDING COMPANY

PROVIDENCE · Boston · Philadelphia · Utica · Charlotte · Atlanta

They're Built



Textile mills throughout the country are making every effort to keep abreast of the times and many of them have modernized their spinning and roving and are taking advantage of the new long draft equipment of the various machinery manufacturers.

These manufacturers never stint on quality; they provide you with the best equipment that technical minds and methods can produce.

It's only fair, both to yourself and the manufacturers, to equip those frames with ring travelers that will give you complete assurance of efficient operation and smooth, strong yarn. That's why, as a matter of sound business logic, we recommend the use of U. S. precision-made, efficiency-tested Ring Travelers—the BEST travelers for the BEST of your spinning frames, whatever their origin.

U. S. Travelers have the uniformity of weight and shape to retain correct tension, they don't overheat, they stay securely on the ring at high speeds, they are durable . . . and there's always

"A Traveler for Every Fibre"

UNIVERSAL RING

BOWEN ROUND POINT TRAVELERS
BOWEN SQUARE POINT TRAVELERS
BOWEN IMPROVED VERTICAL BRONZE
BOWEN PATENTED BEVEL EDGE
BOWEN PATENTED NE-BOW VERTICAL
BOWEN PATENTED VERTICAL OFFSET
BOWEN FLAT OVAL AND ROUND WIRE TRAVELERS

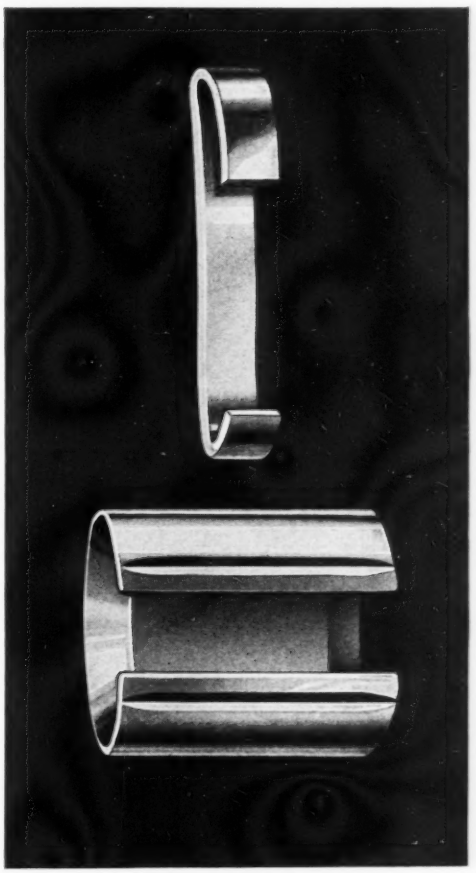
to take the BEST Travelers!

The Bowen Patented Bevel Edge feature of U. S. Ring Travelers produces ideally smooth, even yarn; there are no angular edges to flatten the end . . . no split ends in throwing rayon and silk . . . no fly waste in the spinning and twisting of cotton, wool, worsted, asbestos and kindred fibres. Made and stocked in all sizes and weights, for all kinds and counts of yarns.

Ask for information also on the Bowen Patented Vertical Offset Traveler and the Ne-Bow Patented Vertical Ring Traveler, each of which has definite advantages for particular uses.

Samples for your exact requirements submitted upon request. Write direct, or contact your nearest representative.

Sealed metal containers guarantee that your U. S. Travelers will reach you in perfect condition, with no tampering or loss in count.



The Bowen Patented Bevel Edge Travelers

U. S. RING TRAVELER CO.

PROVIDENCE, R. I. GREENVILLE, S. C.

AMOS M. BOWEN, Pres. and Treas.

Southern Sales Representatives:

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William H. Rose, P. O. Box 792, Greenville, S. C. Oliver B. Land, P. O. Box 158, Athens, Georgia

STANDARD TRAVELERS

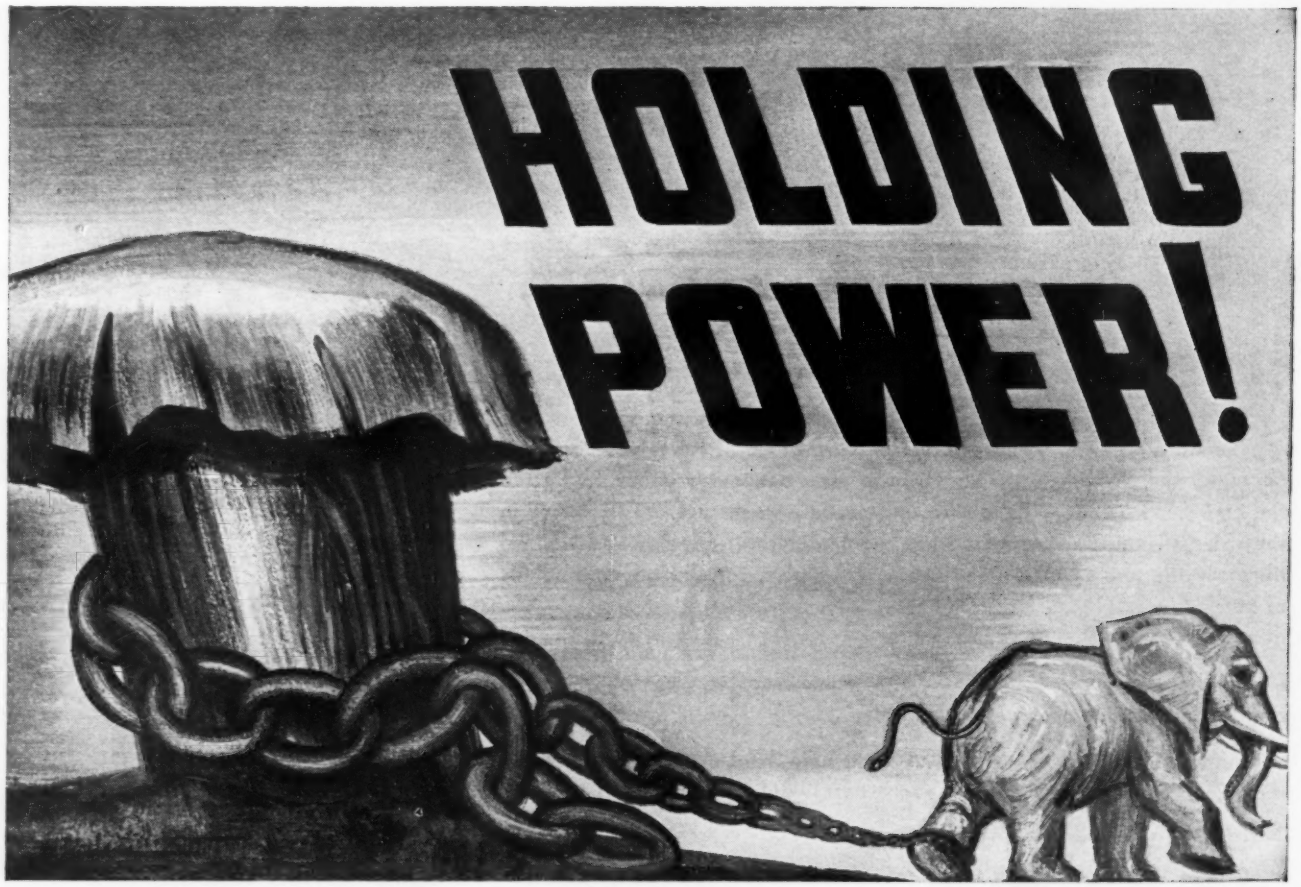


Fig. 1641
Pat. App. for

UNBRAKO

SELF-LOCKING HOLLOW SET SCREWS with the KNURLED POINTS

Pat. App. for
Fig. 1645

Set them up with no more than usual pull and the knurled points lock into place with a grip that sneers at vibration. No matter how severe the unwinding tendency, "Unbrako" Self-Lockers *hold tight!* Yet they're removed as easily as applied and they can be used repeatedly.

The KNURLING of Socket Screws originated with Standard Pressed Steel Co. years ago.

Try them yourself . . . prove it yourself! But be sure to specify "UNBRAKO".

STANDARD PRESSED STEEL CO.
JENKINTOWN, PENNA. BOX 582

BRANCHES
BOSTON • DETROIT • INDIANAPOLIS • CHICAGO • ST. LOUIS • SAN FRANCISCO

Reg. U. S. Pat. Office
UNBRAKO *Screw Products*

ANTI-FRICTION BEARINGS *Last Longer*

Lubricated with *Shell E.X.L. Grease*

—more lubrication per pound

SHELL

BETWEEN load-carrying members and separator — that's where Shell E.X.L. Grease proves its superior lubricating properties. Here's why. Shell E.X.L. Grease . . .

1—Has a high melting point.

2—Is of a smooth texture . . . lubricates adequately.

3—Resists bleeding . . . does not separate at high rotational speeds or at high temperatures.

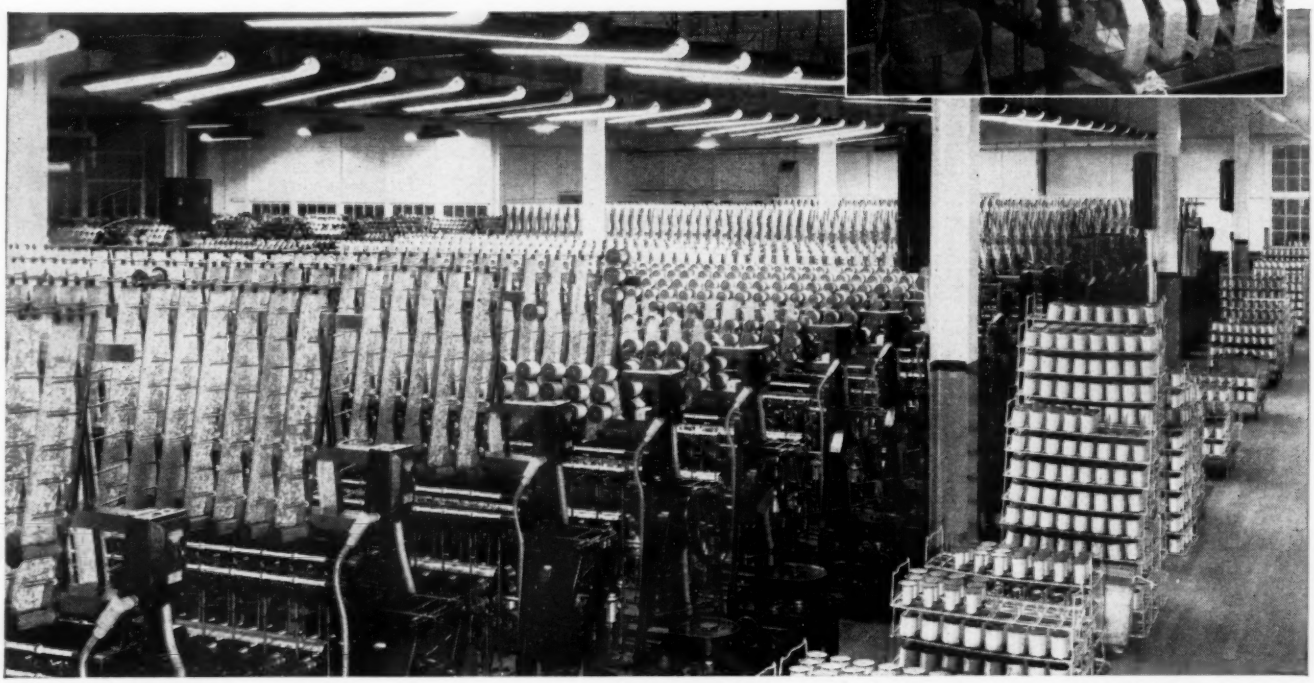
4—Is non-corrosive.

5—Has outstanding resistance to breakdown even at high operating speeds.

6—Seals bearings against dirt, water, etc.

Shell E.X.L. Grease meets (in many characteristics, surpasses) the rigid anti-friction bearing-lubrication requirements. Get the details from the Shell man today.

PICTURES LIKE THESE *illustrate the general solution of a textile mill lighting problem. Helping each operator to do his own job better, faster, and safer is the real objective of G.E.'s "better than daylight" program.*



NEW, SIMPLIFIED RF FLUORESCENT LIGHTING

Provides this mill with *"Better than Daylight"*

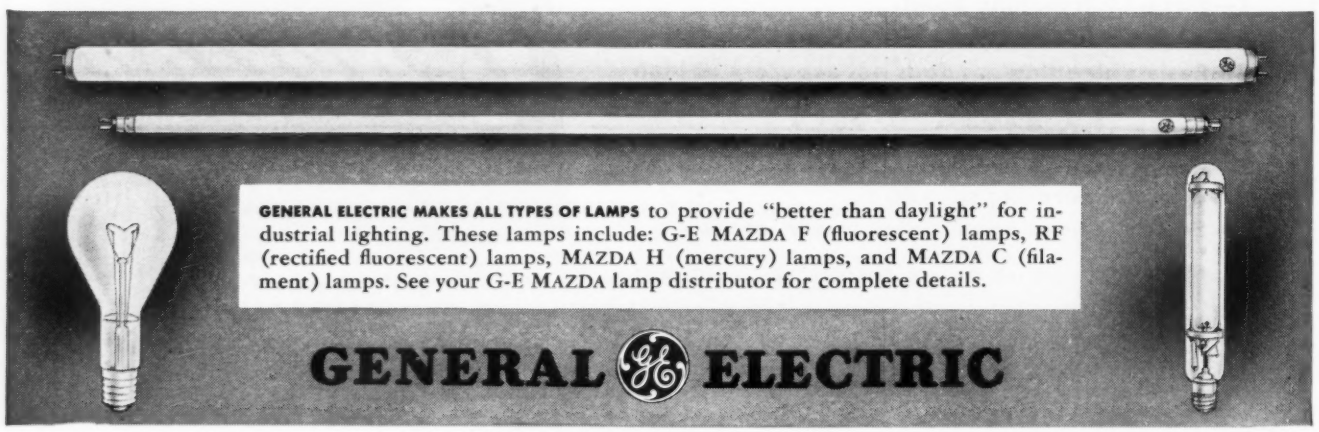
IN THE SILK SPINNING MILL of the Adams Millis Corporation, Tryon, N. C., as shown above, General Electric RF (rectified fluorescent) lamps provide 45 footcandles of illumination. The inset photo at the right shows how clearly detail is revealed by this new kind of light in the silk winding department.

Today with big things happening in industrial lighting, General Electric's new RF lamps should be of greater interest to manufacturers than ever. Here's why:

LOWER PRICES — Effective August 1st, RF lamps, both industrial white and blue-white, were reduced from $4.25 to $3.65.

NEW SIMPLIFIED RF LUMINAIRES are today available with power factor better than 90%, requiring no voltage adjustment. These new units start almost instantly without starter units.

FIND OUT TODAY how easy it will be to install G-E RF lighting in your mill, engineered to your needs. This new kind of light costs little to install and provides "better than daylight" in industry because it is efficient, economical and dependable 24 hours a day. In addition, RF lighting is cool, and combines high light output with low maintenance costs. The lighting is practically shadow-free and has minimum stroboscopic effect.



GENERAL ELECTRIC MAKES ALL TYPES OF LAMPS to provide "better than daylight" for industrial lighting. These lamps include: G-E MAZDA F (fluorescent) lamps, RF (rectified fluorescent) lamps, MAZDA H (mercury) lamps, and MAZDA C (filament) lamps. See your G-E MAZDA lamp distributor for complete details.

GENERAL ELECTRIC

Allegheny Stainless from Ryerson helps Gaston Co. build new Kiers

For many years, the Gaston County Dyeing Machine Company, specialists in building and designing dye house equipment, has depended on Ryerson for prompt shipment of uniform high quality steel. All the Allegheny Stainless steel used in the kiers shown above (built by Gaston for the January & Wood Co.) was furnished by Ryerson.

In the Ryerson stocks are more than 10,000 kinds, shapes and sizes of steel, including many of the special steels used in the textile industry. Even today, with steel difficult to obtain because of the National Defense Program, Ryerson continues with its Certified Steel Plan. Naturally, many sizes and certain products are out of stock. However, for the most part you can depend on Ryerson for immediate shipment of a wide range of steel products.

Whatever your steel requirements, phone, wire or write the nearest of the 10 conveniently located Ryerson plants. For best service during the period of heavy demand, "open" orders are advisable. Stock List sent promptly on request.

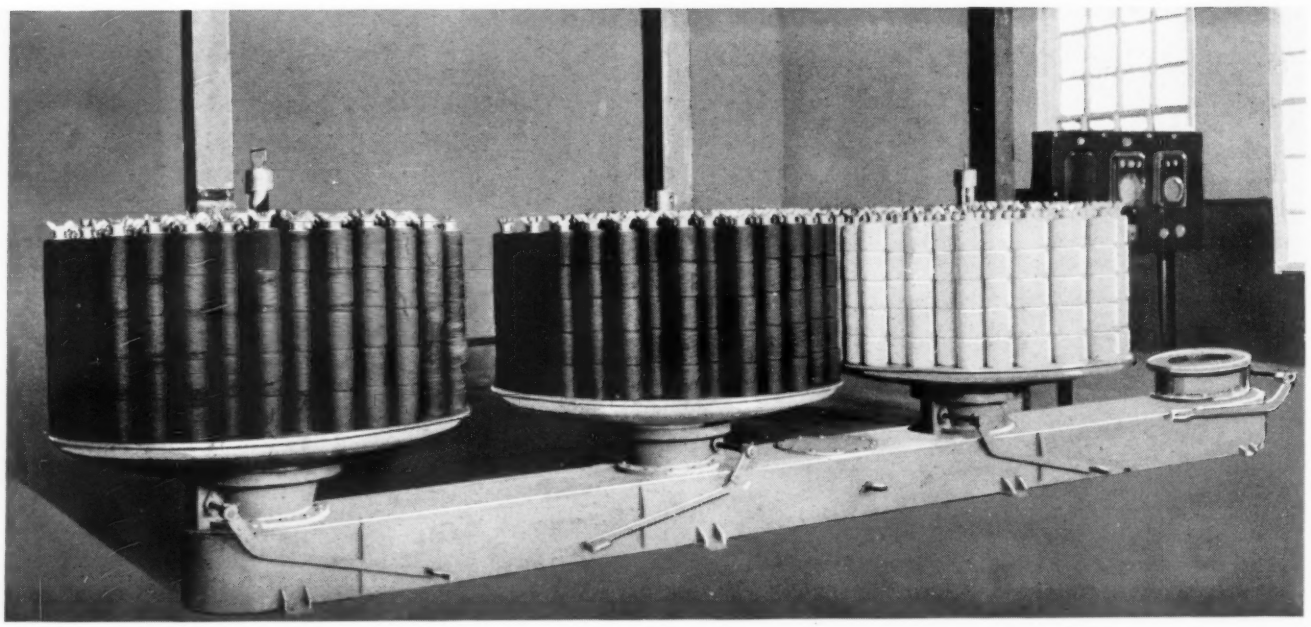
Joseph T. Ryerson & Son, Inc., Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Jersey City.

RYERSON *Certified* **STEELS**

RYERSON CERTIFIED STEELS

January + Wood Selects

FOR CONTROLLED



Automatically Controlled Drying Machine

Another of the country's leading manufacturers—this time one with over 90 years' dyeing experience—has switched to GASTON COUNTY'S Modern Stainless Steel Dyeing Equipment. Here, again, is conclusive evidence that Gaston County's PACKAGE DYEING MACHINES meet the strictest requirements of modern textile mills for high-quality, low-cost dyeing. Specializing in dyeing equipment for almost a quarter of a century, GASTON COUNTY has continued to improve its products through the use of newer materials, more skillful workmanship, advanced control systems for higher standards of accuracy, increased hourly production, important over-all savings in power, labor, and materials.

One of the outstanding advantages of GASTON COUNTY'S DYEING MACHINES is their flexibility. Your jobs do not have to be modified to fit the machines. The newly developed robot DYEMASTER controls with dyeing program charts provide a permanent record, enabling you to match shades perfectly.

POSITIVE CONTROL from the loading to the unloading of the kiers, GASTON COUNTY'S scientifically engineered push button controls completely eliminate guesswork and add-dye delays. Machines are equipped with automatic temperature controls—automatic dye-liquor flow reversing mechanisms—patented "two-way running wash" system and "dye liquor flow control".

Machines can be furnished in Stainless Steel—Nickel Iron—Monel—in single or multiple kier set-ups—in capacities ranging from 1 to 2000 pound units. Mills interested in lowering the cost and improving the accuracy and quality of their dyeing will find it profitable to investigate GASTON COUNTY'S equipment. Full particulars on request.

Representatives

Albert R. Breen
80 East Jackson Blv'd
Chicago, Ill.

Gaston County Dyeing Machine Co.
67 Broad St., New York City
G. Lindner, Manager

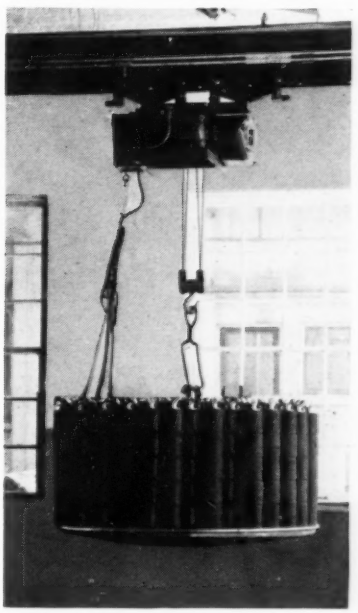
Eduard Seelig, Cia., Ltda.
Rio De Janeiro
Brazil

GASTON COUNTY
DYEING MACHINE COMPANY

Gaston County Equipment

DYEING EFFICIENCY

Extracting Machines—Oven Type Package Dryers
Rapid "Blower Type" Drying Machines
Carriers for Package, Roving, Cheeses and Cones
Density Controls for Beam Warpers
Beam and Package Bleaching Machines
Package Yarn Shaping Machines
Auxiliary Equipment for Dye Houses
Hot Waxing Attachments for Thread Yarns
Emulsion Attachments for Knitting Yarns
Sample Dyeing Machines—Dye Beams—Dye Tubes
COMBINATION BEAM AND PACKAGE DYEING MACHINES

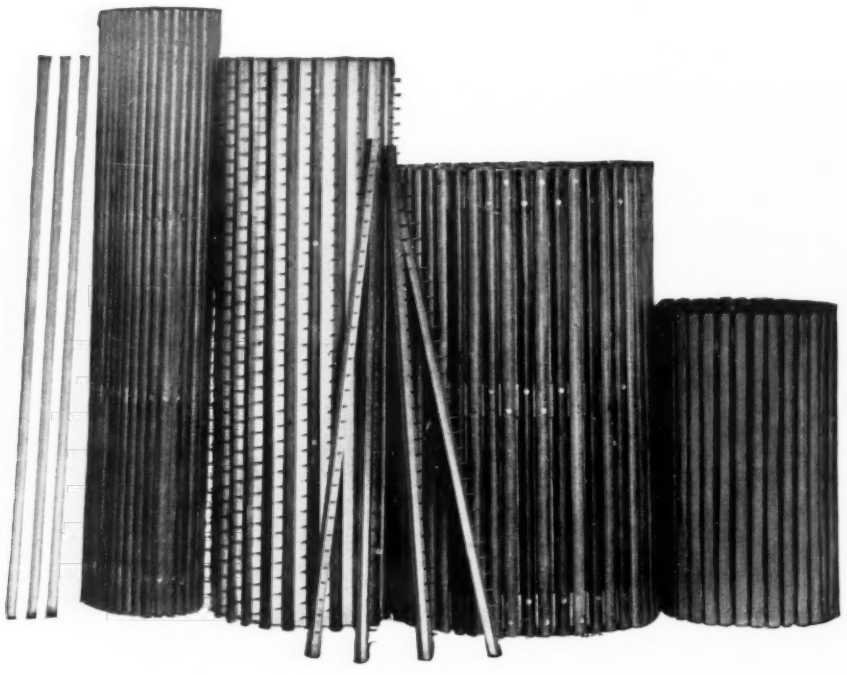


Moveable Package Carrier

Extractor and Automatically Controlled Stainless Steel Package Dyeing Machines

STANLEY, NORTH CAROLINA
U. S. A.

TEXTILE SERVICE



PICKER APRONS

Picker Aprons, as made by F. C. Todd, Inc., are of the finest materials, assembled by skilled workmen, assuring dependable day-in and day-out performance without expensive stops for adjustments and repairs.

These Aprons, because of their unequalled quality, are now standard equipment in textile mills throughout the country.

Available in both spiked and slat types for all makes of pickers, openers, breakers — waste machines and garnet machines.

We also make aprons for all makes conditioning machines.

We Carry Parts for

PICKERS
✦
CARDS
✦
LAP MACHINES
✦
COMBERS
✦
DRAWING
✦
SLUBBERS AND ROVING

SPINNING
✦
TWISTING
✦
WINDING
WARPING
SPOOLING
✦
BOBBINS
✦
SPOOLS
✦
SKEWERS

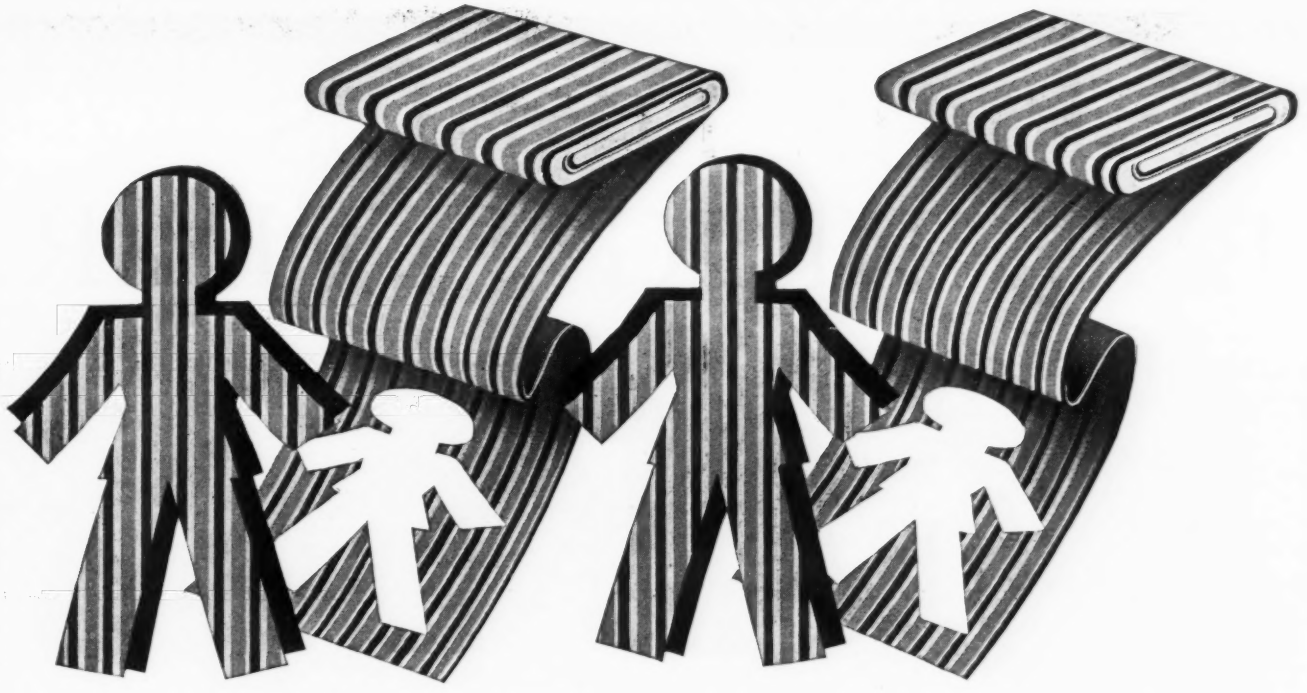
Quality and Service Our Motto.

Liquidations F. C. TODD, Pres. & Treas. *Appraisals*

F. C. TODD INCORPORATED

TEXTILE MACHINERY AND SUPPLIES

GASTONIA, N. C.



Aridye is Proud of Its Uniformity*

Shirt sleeves, bosoms and pockets that match—panels in print dresses that are identical as to shade—that's what uniformity means to the cutter. Millions of yards of cloth have been printed with remarkable uniformity by the Aridye method.

Aridye Colors print in the final shade. They do not need to be developed by chemical aftertreatment—with all the possibilities of shading from side to side or piece to piece because of variations in the conditions of after-treatment.

Aridye Colors themselves have an excellent record of uniformity, which results in a greater color uniformity in the printed fabrics. In order to assure the printer of uniform colors, the Control Laboratory makes careful tests of all raw materials, of the colors at each step of the manufacturing process and then of the final Aridye Colors.

**Trade Mark Reg. U. S. Pat. Off.*

ARIDYE BRINGS YOU THESE PRODUCTION ADVANTAGES

NO CHEMICAL AFTERTREATMENT • PRINTS IN FINAL COLORS • RAPID COLOR MATCHING

COLORS SHIPPED READY FOR USE • FEWER SECONDS

FAST TO WASHING
•
EXCEPTIONALLY FAST TO SUNLIGHT
•
NEW BRIGHT COLORS
•
UNUSUAL UNIFORMITY OF SHADE
•
ENGRAVINGS EXACTLY REPRODUCED

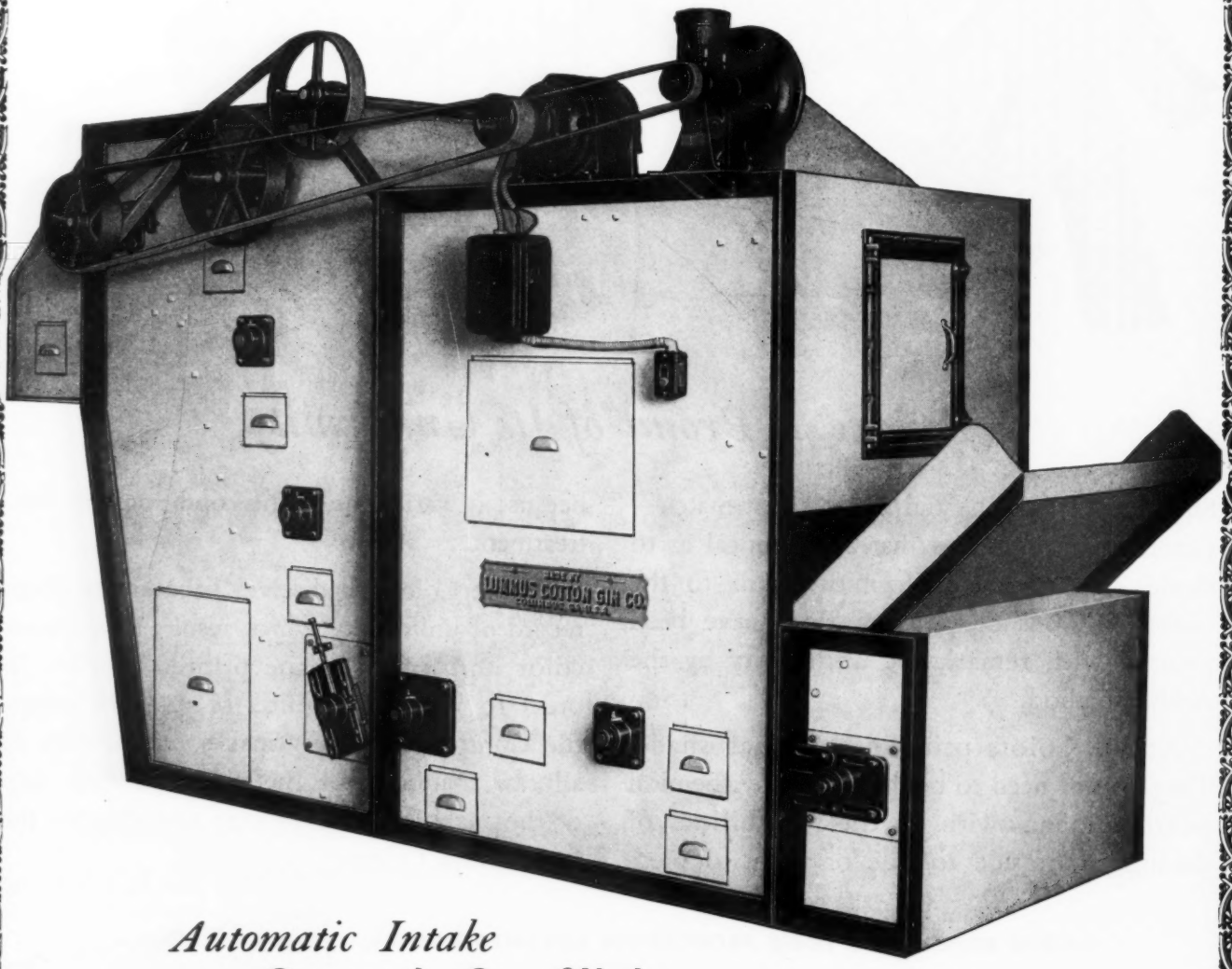
Aridye

TEXTILE COLORS

ARIDYE CORPORATION *A Subsidiary of Interchemical Corporation* FAIR LAWN, NEW JERSEY

You Get All Aridye Advantages by Using Aridye Colors Reduced with Aridye Clear and Applied by the Aridye Methods

THE LUMMUS BLENDING FEEDER



Automatic Intake
Cannot be Overfilled
Improved Cleaning Grids
Individual Motor and Dust Fan
All Ball Bearing Throughout

Sold by

AldricH MachinE

Greenwood, WorkS South Carolina

TO A WAITING BUYER IN THE *Argentine*

Safely Protected with
FIBREEN

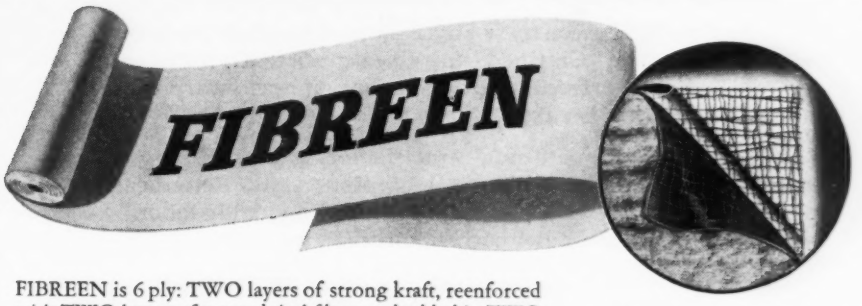
DAMP, penetrating salt air—exposure and rough handling . . . even dust and dirt . . . lie ahead for goods consigned overseas. The problem of protection for export shipment is tough . . . but exporters are solving it, effectively and economically, by the use of FIBREEN.

Here is a reenforced paper, so tough, so waterproof, so rugged that it is used to wrap 10-ton bundles of steel for shipment on open freight cars — so pliable and convenient it can be used in any shipping room to wrap the smallest of parcels.

FIBREEN and The Sisalkraft Co. hold a unique position in the field of protective wrapping and packaging. They offer the ideal combination of material, plus experience and research as applied to problems of protecting goods in shipment or in storage.

FIBREEN often replaces materials and methods that are much more expensive — frequently saving time as well as money.

Investigate FIBREEN. Tell us what you ship and how you now package it. We offer you the assistance of our research staff, and a quantity of FIBREEN for your own trial and experiment. There is no obligation. Write us, outlining *your* packing requirements.

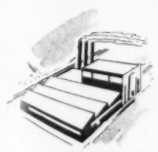


FIBREEN is 6 ply: TWO layers of strong kraft, reenforced with TWO layers of crossed sisal fibers embedded in TWO layers of special asphalt — all combined under heat and pressure. FIBREEN is pliable and clean — will not scuff — stands an astonishing amount of abuse and exposure. It is used either as a wrapping or a lining material.

FIBREEN is a product of The Sisalkraft Co. — also manufacturers of Sisalkraft, Sisal-X, Sisal-Tape and Copper-Armored Sisalkraft.

Soak it—twist it—try to tear it!

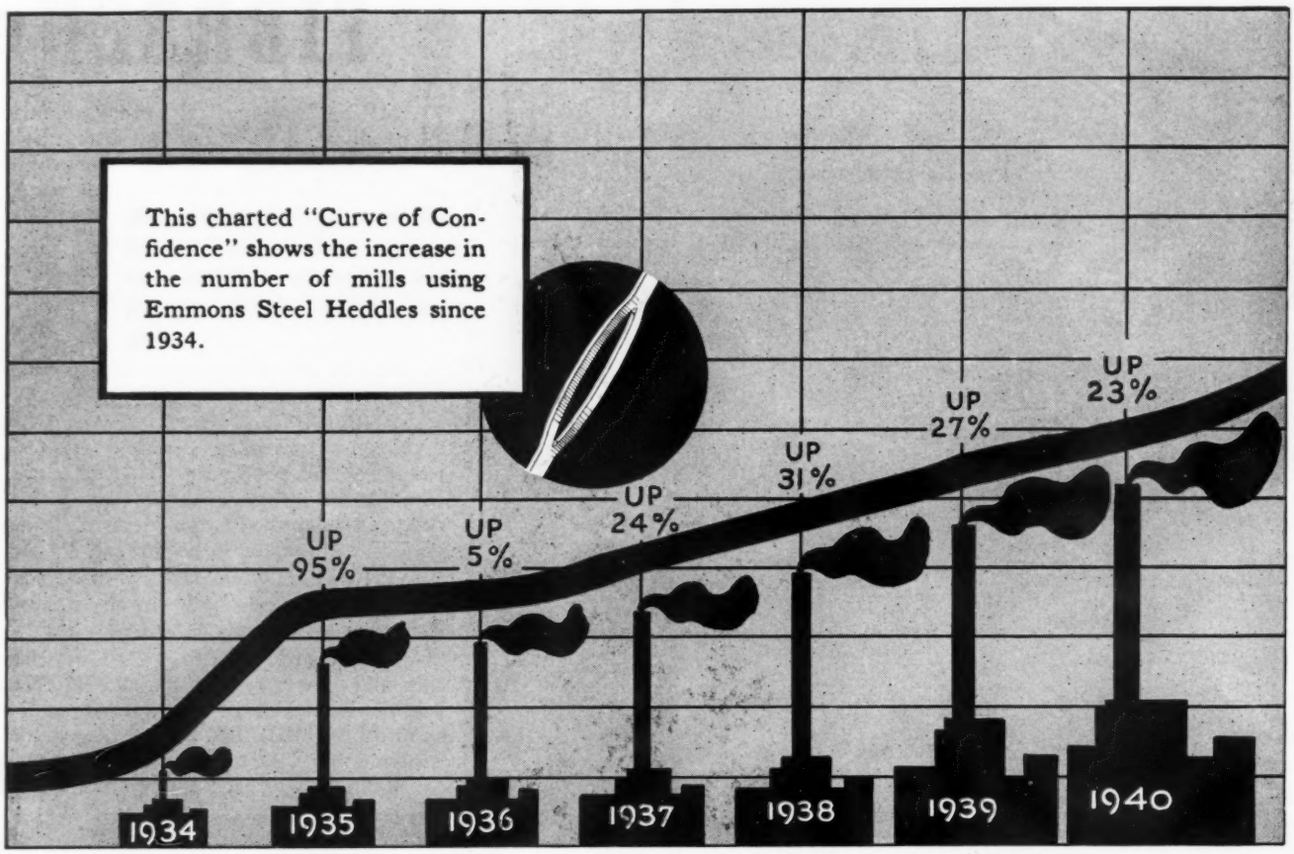
Only when you get a sample in your own hands can you realize that a *paper* can be so strong — so tough — and impervious to moisture. There is no other material like FIBREEN. Available promptly in rolls and blankets of many widths. Write for sample



THE SISALKRAFT CO.
205 W. WACKER DRIVE · CHICAGO, ILL.
NEW YORK · SAN FRANCISCO · LONDON · SYDNEY

SERVING INDUSTRY . . . CONSTRUCTION AND AGRICULTURE THROUGHOUT THE WORLD

MORE AND MORE MILLS AGREE WITH YOUR PURCHASE OF EMMONS HEDDLES



WHY do more and more mills buy Emmons heddles? Because the heddle with the "Certified" tag gives consistently satisfactory results: less fly, freedom from chafing, uniform warp tension and fewer warp breaks.

WHAT is behind such continually satisfactory results? Emmons inspection methods *plus* outside laboratory tests. Periodical open-market purchases and tests by a famous outside laboratory check for smoothness, corrosion-resistance and long life.

THIS SEAL is the "OK" of an Emmons inspector on *every* Emmons product. Placed on Emmons Heddle Frames, Reeds and the famous Chafeless Cord Cotton Harness, it protects your mill against production losses from faulty equipment.

How to get more for your money in loom harness equipment — practical hints in this **FREE** booklet. Send for it today!

DISTRIBUTION KEEPS PACE WITH NEW BUSINESS

These experienced millmen specialize in Emmons Loom Harness Equipment. Emmons products, including standard sizes of flat heddles, are now stocked in Charlotte and Atlanta. Top-quality reeds manufactured in Charlotte. Get in touch with your nearest Emmons branch office today:

CLIFTON WATSON: Manager, Southern Sales, Box 2036 Charlotte, N. C., Tel. Charlotte 3-7503

ARTHUR HARRIS: Box 1982, Atlanta, Ga. Tel. Main 2643

ALVIN BRALEY: Box 236, Itasca, Tex. Tel. 170

W. S. TAYLOR: 171 Madison Avenue, New York City. Tel. Lex. 2-6060

EMMONS

LOOM HARNESS COMPANY

LAWRENCE, MASS. . . . . CHARLOTTE, N. C.

SEE LATEST TEXTILE WORLD YEARBOOK FOR DETAILS ON ALL EMMONS PRODUCTS

Speed Control Convenience
WITHOUT LIMITATIONS

RELIANCE V*S DRIVE

AN ALL-ELECTRIC ADJUSTABLE-SPEED DRIVE
FOR A-C. CIRCUITS
Speed Ranges up to 16 to 1—Sizes 1 to 30 hp.

PICK THE SPOT where speed changing will be done most handily and *when needed.* You can put the speed changer for the Reliance V*S Drive right there, and the *start-stop* station alongside. There are no limitations whether machines are long or short, high or low, wide or narrow. Speed changer and *start-stop* station can be at any distance from the motor or speed-control unit. Put them any place that you can run a wire.

PRODUCTION AIDS

Other features which help boost production are: quick stopping, reversing, safe speeds for threading and inching, ample starting torque with controlled acceleration, and speed setting. *Get Bulletin 310 for details.*

RELIANCE ELECTRIC & ENGINEERING COMPANY
1088 Ivanhoe Road • • • Cleveland, Ohio

BIRMINGHAM • BOSTON • BUFFALO • CHICAGO • CINCINNATI • DETROIT • GREENVILLE (S.C.) HOUSTON (TEX.) • LOS ANGELES • MINNEAPOLIS • NEW YORK • PHILADELPHIA • PITTSBURGH PORTLAND (ORE.) • ST. LOUIS • SAN FRANCISCO • SYRACUSE (N.Y.) AND OTHER PRINCIPAL CITIES

● These control elements make starting and stopping as easy as ringing a door bell; speed changing as simple as tuning your radio. *Mount them wherever you can run a wire.*

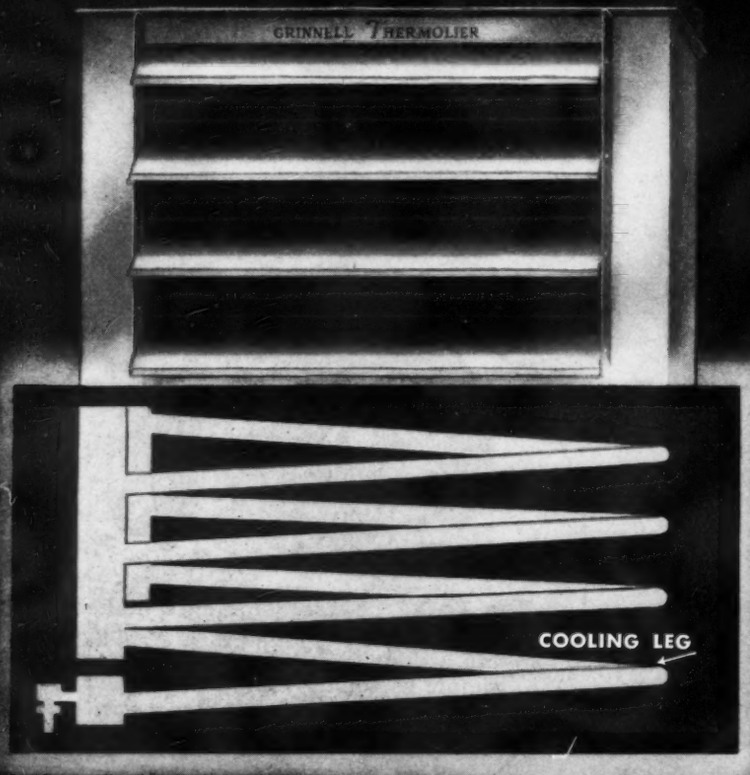
THE DIRECT WAY

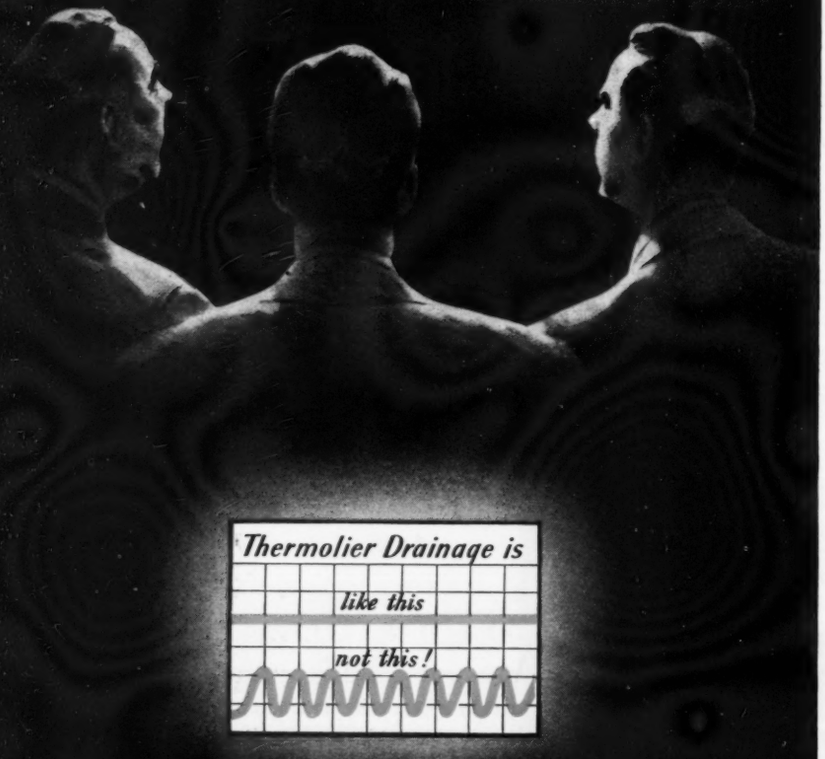
Speed-changing devices, clutches, gear trains, a multiplicity of handles and knobs disappear when you apply this wide-range adjustable-speed drive. It makes full use of the electric motor, not only as a power unit, but also as a simple speed-changing device.

RELIANCE A-C D-C MOTORS

Doctors Don't Guess

Why Should You?





It takes more than a superficial examination to find the strength and weakness of Unit Heaters, too.

You're buying **HEAT** not ornaments, so don't stop at the housings (they're all smartly styled). *Look inside* . . . that's where the differences show up – vital differences in performance under *actual working* conditions, as opposed to standard ratings under ideal conditions.

Outstanding among all Thermolier features is an efficient *Internal* Cooling Leg, integral with the unit. It removes condensate *continuously* instead of intermittently; keeps *all* of the heater working all the time; eliminates "air binding" and hammer; permits use of simple thermostatic trap and is equal in actual cooling effect to *more than 100 feet* of exterior cooling piping.

This one feature *alone* places Thermoliers ahead of all other unit heaters in heating efficiency. Send for complete Data Book explaining Thermolier features. Grinnell Company, Inc., Executive Offices, Providence, R. I. Branch offices in principal cities of the United States and Canada.

OTHER THERMOLIER ADVANTAGES:

1. *U-Shaped Tubes* eliminate expansion strains the simplest way . . . insure dependability.
2. *Positive Built-In Drainage* – every tube is pitched for complete drainage of condensate.
3. *Superior Fin Design* – square fins instead of round – 24% more radiating surface. Patented collars need no solder for strength. Dirt collection is reduced to a minimum.

DeLuxe *Industrial* *Factory*

GRINNELL

THERMOLIER

THE UNIT HEATER WITH 14 POINTS OF SUPERIORITY

Certified
FLEUR-O-LIER
The Manufacturer guarantees by affixing this label that this Fluorescent Luminaire is a duplicate of samples found by periodic examination to comply with the minimum requirements as set up in the
"SPECIFICATIONS FOR LUMINAIRES, FITTINGS AND AUXILIARIES FOR FLUORESCENT LAMPS"
which are sponsored by the Manufacturers of Mazda Lamps
ELECTRICAL TESTING LABORATORIES
NEW YORK N. Y.
E.T.L.
A COPY OF THIS CERTIFICATE SHOULD APPEAR UPON EACH UNIT OR PACKAGE
E.T.L.
FLUORESCENT LIGHTING FIXTURES EMPLOYING EXISTING TYPES OF LAMPS ARE NOT RECOMMENDED FOR SCHOOLS, OFFICES AND SIMILAR LOCATIONS UNLESS LAMPS ARE SHIELDED FROM DIRECT VIEW
THIS CERTIFICATION IS CONTINGENT UPON EMPLOYMENT OF CERTIFIED AUXILIARIES OF OVER 85% POWER FACTOR

Look for THIS LABEL

TO BE SURE OF GETTING DEPENDABLE FLUORESCENT LIGHTING FIXTURES

(I)

These 3 SAFEGUARDS ASSURE YOU OF SAFE, SATISFACTORY PERFORMANCE

TESTED! Famous Electrical Testing Laboratories put FLEUR-O-LIER fixtures through exhaustive tests, which include such vital points as FLICKER CORRECTION, DURABILITY AND SAFETY, EASE OF MAINTENANCE, DEPENDABLE BALLASTS AND STARTERS, EFFICIENT LIGHTING PERFORMANCE, AND HIGH POWER FACTOR (OVER 85%).

CERTIFIED! Based on these tests, Electrical Testing Laboratories gives the FLEUR-O-LIER manufacturer the right to affix the label of certification to all fixtures identical to the sample submitted. This label is your assurance that the fixture wearing it meets the 50 rigid specifications set up by MAZDA lamp manufacturers for better light, better service. E. T. L. maintains a constant check-up of random sample fixtures—thus assuring *uniform quality.* You can buy Certified FLEUR-O-LIERS with confidence!

GUARANTEED!

FLEUR-O-LIER
Manufacturers
GUARANTEE
This certified Fleur-O-Lier, when properly installed and equipped, is guaranteed to be free from defects in material, workmanship or assembly for a period of ninety (90) days from date of delivery to purchaser. Should any such defects appear within that time and under normal conditions of use, the undersigned company will furnish new material or parts in exchange for any found defective and will correct any faulty workmanship or improper assembly.
Fleur-O-Lier specifications require the use of certified auxiliary parts.
(NAME OF MANUFACTURER)

IMPORTANT!
Before you buy fluorescent check with your local electric service company. They will give you expert advice on how to install fluorescent fitted to your specific needs.

WIDE VARIETY! You can get Certified FLEUR-O-LIERS in over 100 different designs and in a wide range of prices.

FLEUR-O-LIER
Manufacturers

Participation in the FLEUR-O-LIER MANUFACTURERS' program is open to any manufacturer who complies with FLEUR-O-LIER requirements

TEAR OUT AND MAIL

Fleur-O-Lier Manufacturers • 2137-9 Keith Bldg., Cleveland, Ohio

Please send me FREE new booklet "50 standards for satisfaction," together with list of Fleur-O-Lier manufacturers.

Name _____

Address _____

City _____ State _____

ANNOUN

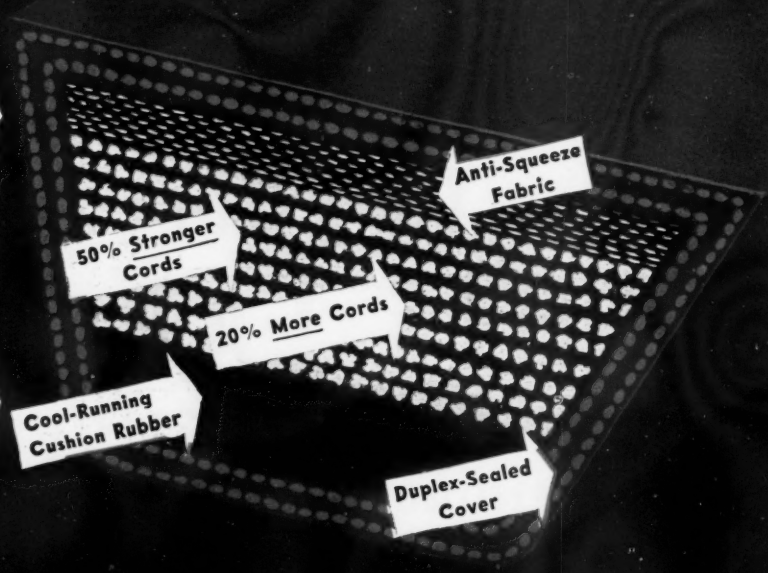
TEXROPE "SUPER-7"

1 50% STRONGER CORDS! Sensational new Flexon process makes cords 50% stronger than even those in former great Texrope belts.

2 20% MORE CORDS! Count them! You get 20% more of these tough, extra pulling power cords in every Texrope Super-7.

3 INCREASED LIFE! Cords float on amazing cool-running cushion rubber that absorbs shock...actually increases belt life phenomenally.

4 EXTRA PROTECTION! Exclusive duplex-sealed cover protects pulling cords against dirt, grit, moisture, and other adverse elements.



CING *The New Wonder V-Belt...*

HERE'S A TRUE FACT: This new Super-7 Texrope* is by far *the best belt ever built by Allis-Chalmers,* originators of the multiple V-belt drive!

Flexon, a sensational engineering advancement in belt making, actually makes pulling cords 50% stronger . . . and adds years to belt life by preserving the exact ratio between strength and flexibility.

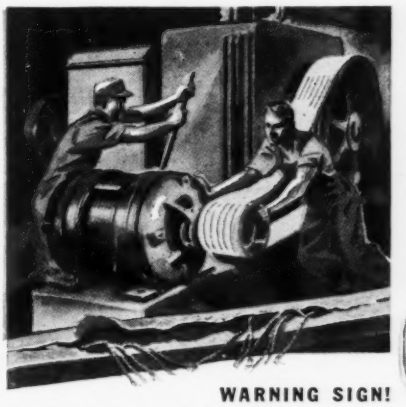
And there's 20% more of these heavy-duty, extra-tough cords — each imbedded in special heat-resisting rubber. Then, as an added safety factor against heat and resultant belt disintegration, we float these Flexon cords on cool running, live cushion rubber that's made to absorb terrific vibration and shock.

But we're not asking you to experiment with anything untried. Super-7 Texrope Belts have had to pass not only every laboratory torture test with flying colors — but before we put them on the market, *they had to prove their plus staying power in actual field tests for over four years!*

Why not be the first to get the advantages of the new Texrope Super-7? Call the Allis-Chalmers district office — or the Texrope dealer near you. Ask for Bulletin B6190.

Available in All Sizes — ½ hp to 2000 hp.

LOOK OUT FOR DANGER in belts with stiff, unpliable cords! Such belts *look* strong . . . but actually they buckle over sheaves, build up excessive heat that attacks pulling cords. Result: Belt failure far sooner than you expect it.



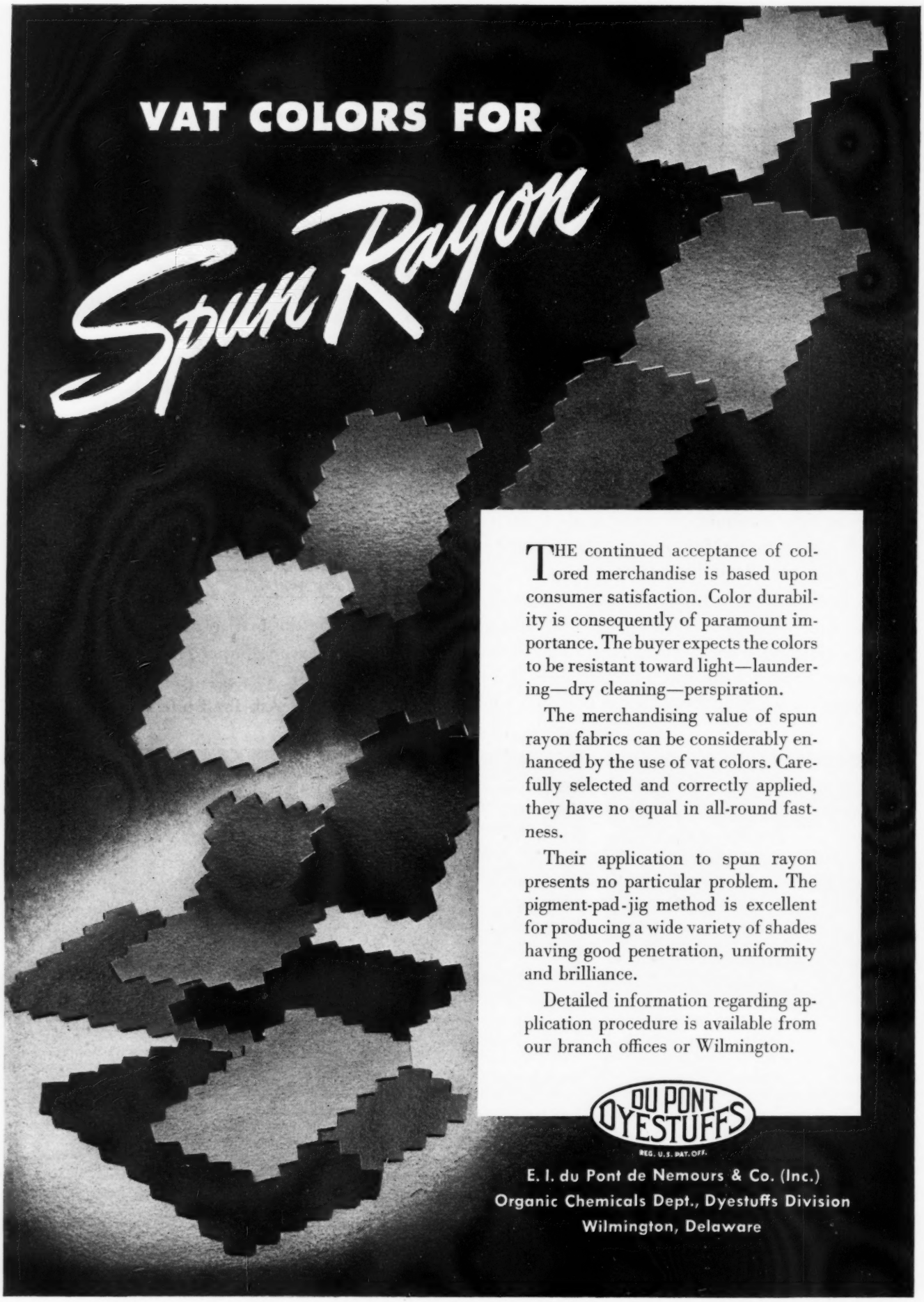
WARNING SIGN! Sagging, slipping belts mean too much stretch not backed up by balanced cord strength. Motor must be pulled back often to take up slack. Result: When stretch limit is reached belt breaks under tension.

SUPER-7 TEXROPE BELTS are made by amazing Flexon process that *combines* flexibility with low stretch . . . great strength. Cords float on cool-running, shock absorbing cushion rubber. Result: *true* strength . . . *true* pulling power . . . *true* endurance. A 1421

ALLIS-CHALMERS
MILWAUKEE·WISCONSIN

*Trade mark registered U. S. Patent Office. Texrope Super-7 Belts are the result of the co-operative research and design genius of *two* great companies — Allis-Chalmers and B. F. Goodrich — and are sold exclusively by Allis-Chalmers.

VAT COLORS FOR *Spun Rayon*



THE continued acceptance of colored merchandise is based upon consumer satisfaction. Color durability is consequently of paramount importance. The buyer expects the colors to be resistant toward light—laundering—dry cleaning—perspiration.

The merchandising value of spun rayon fabrics can be considerably enhanced by the use of vat colors. Carefully selected and correctly applied, they have no equal in all-round fastness.

Their application to spun rayon presents no particular problem. The pigment-pad-jig method is excellent for producing a wide variety of shades having good penetration, uniformity and brilliance.

Detailed information regarding application procedure is available from our branch offices or Wilmington.

DU PONT DYESTUFFS
REG. U.S. PAT. OFF.

E. I. du Pont de Nemours & Co. (Inc.)
Organic Chemicals Dept., Dyestuffs Division
Wilmington, Delaware

Dayco TEMPERED ROLL COVERINGS
Take the "Daze" out of Mondays!

It doesn't take an honor student to get hep to the fact that with winter weather just around the corner it's high time to do something about "Blue Mondaze." In other words, get Dayco Tempered Roll Coverings and get instantaneous start up on Mondays after week-end shut downs.

In top-producing textile mills everywhere, Dayco Tempered Roll Coverings are eliminating ends down—decreasing maintenance cost and cutting "down time" to a negligible minimum. Monday through Saturday, each week of each month, these all-season Daycos take temperature changes or extremes in easy strides—because they don't flatten, distort or groove. Furthermore, they have been tested and proved to serve longer and give greater finished yarn production, at less-cost-per-month-of-use.

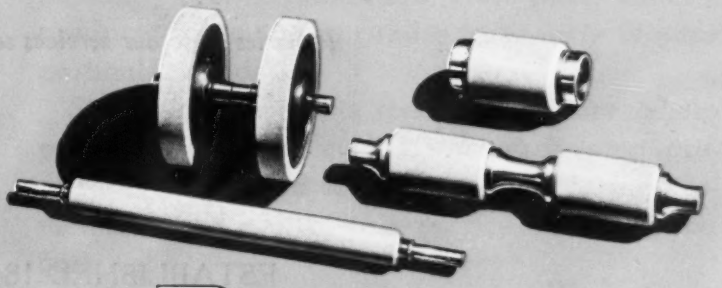
Get the Dayco remedy for slow-motion "Mondaze" and get high standard, uniform yarn every day, all day.

THE DAYTON RUBBER MFG. CO.
TEXTILE PRODUCTS DIVISION, Dayton, Ohio
The Originators and Pioneers of Dayco Tempered Roll Coverings

GREENVILLE SALES OFFICE
Woodside Building . . . Greenville, S. C.

HERE'S WHY—
DAYCO TEMPERED ROLL COVERINGS ARE THE No. 1 CHOICE OF AMERICA'S TOP-FLIGHT TEXTILE MILLS

1. Improved drafting.
2. No grooving—less ends down.
3. Unaffected by temperature changes.
4. Lower net roll costs.
5. Long service life.
6. Easy to apply.
7. Proper cushioning.
8. Not affected by hard ends.
9. Static free.
10. Oil resisting.
11. One piece tubular construction.
12. Produce more uniform yarn.



Dayton
Thorobred TEXTILE PRODUCTS
Dayco TEMPERED ROLL COVERINGS-LOOM SUPPLIES

MADE BY THE WORLD'S LARGEST MANUFACTURER OF V-BELTS

COPYRIGHT 1941, THE DAYTON RUBBER MFG. CO.

L. F. Dommerich & Company

Executive and General Offices

271 MADISON AVENUE
NEW YORK, N. Y.

Telephone: AShland 4-8650

FACTORS

For Manufacturers and Merchants

Inquiries as to our services solicited

●

ESTABLISHED 1840

CHECK *Special*
STANDARD SILICATES
FOR

- **Kier Boiling**
- **Soaping Prints**
- **Scouring Rayons**
- **Scouring Yarns**
- **Silk Weighting**
- **Water Treatment**
- **Peroxide Bleaching**

IN GRADES TO MEET YOUR NEEDS

To make your merchandise most salable—to make your processes most effective—standardize on STANDARD TEXTILE SILICATES. Combining highest soil-suspending power with controlled alkalinity over a wide range, these pure, uniform products are made in grades to *exactly* fit your particular needs!

Standard maintains a special laboratory to help progressive textile manufacturers develop procedures best suited for their individual requirements. Make use of this service—it costs you nothing!

DIAMOND ALKALI COMPANY • Standard Silicate Division

Plants at CINCINNATI · JERSEY CITY
LOCKPORT, N. Y. MARSEILLES, ILL.
DALLAS, TEXAS

General Offices • PITTSBURGH, PA.

"With

Gulf Quality Lubricants

we get capacity output 24 hours a day"

...says this Superintendent of Weaving

"and our maintenance costs are very low, too."

"WITH the lubricants recommended by a Gulf engineer in service, we get capacity output from this battery of looms 24 hours a day," says this superintendent of weaving. "Only because we use lubricants of the highest quality are we able to maintain such a production schedule. And our maintenance costs are very low, too."

Scores of other mill operators also find that it pays to standardize on Gulf quality lubricants. They report *efficient operation* of their equipment, *minimum downtime*, and *low repair expense*. For severe service proves the endurance and resistance to decomposition of these lubricants. They retain their lubricating qualities under conditions which would cause ordinary lubricants to deteriorate quickly.

Your mill, too, can benefit from Gulf quality lubricants. Ask a Gulf engineer to look over your equipment and give you his suggestions for improved lubrication. His broad experience with all types of equipment similar to yours is your assurance of sound recommendations.

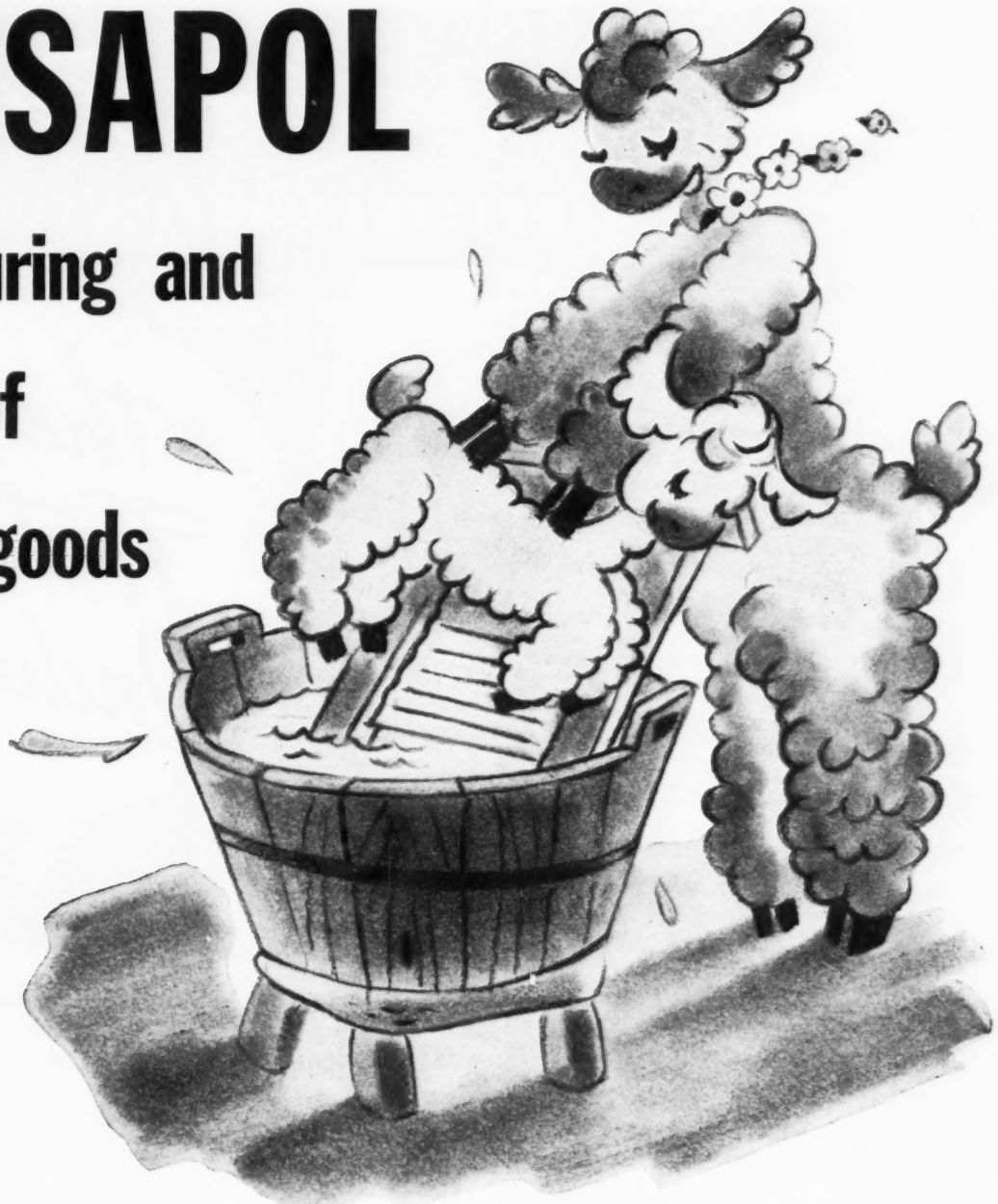
Gulf quality oils and greases are quickly available to you through more than 1200 warehouses located in 30 states from Maine to New Mexico. Write or 'phone your nearest Gulf office today.

GULF INDUSTRIAL LUBRICATION

GULF OIL CORPORATION · GULF REFINING COMPANY · PITTSBURGH, PA.

BENSAPOL

for scouring and fulling of woolen goods



BENSAPOL *for woolens* has become a by-word of the industry. This remarkably effective product—a derivative of our famous Monopole Oil—not only acts as a solvent and scouring agent . . . it has high softening properties *as well.* Takes less time, yet does the job *better than soap.* BENSAPOL leaves the fibre in excellent condition for dyeing and all subsequent processes.

BENSAPOL prevents the formation of Lime and Magnesia salts that result from soap. It keeps these compounds in solution, eliminates trouble in other operations. BENSAPOL *actually aids* rope conformation, makes your milling easier in every way! Gives fabrics a *denser felt* and *firmer handle.* It *prevents bleeding* in the fulling of re-dyed stock. Has extremely high efficacy in removing local stains and oil spots.

BENSAPOL keeps soap in a semi-liquid condition. Its soap displacement weight means *no extra cost.*

BENSAPOL is also highly recommended for SILKS, RAYON and COTTON. It acts as a softener, assures better handle.

Write today for a generous sample. No obligation.

WOLF BRAND PRODUCTS

JACQUES WOLF & CO.

Chemicals PASSAIC, N. J.

WAREHOUSES: Providence, R. I., Philadelphia, Pa., Utica, N. Y., Chicago, Ill., Greenville, S. C., Chattanooga, Tenn., Knoxville, Tenn., Charlotte, N. C., Milwaukee, Wisc., Columbus, Ga.
Midwestern Distributor: Bradley F. Marthens, Chicago, Ill.

Modern Leather Belting

OFFERS THESE OUTSTANDING ADVANTAGES TO

the Textile Industry!

Transmits More Power . . . Leather has the highest permanent pulling power of any known belting material, thereby making it capable of transmitting more power.

Is More Efficient . . . Due to fibre structure and belt design Leather Belting has fewer power losses, resulting in higher drive efficiency.

Lower Power Consumption . . . Modern Quality Leather Belting is dynamic, live—not static and inert like substitute materials.

Great Overload Capacity . . . Provides a higher factor of safety than that offered by other belting materials.

Less Maintenance . . . Leather Belting can be readily changed —lengthened or shortened if machines must be relocated. Is readily made endless on the job without dismantling machines.

Highly Adaptable . . . A few widths of Leather Belting in your stock room take care of many requirements. No need for careful matching of strand lengths as in multiple-strand drives. No need to discard a whole set of belts because of uneven stretch.

Very Versatile . . . Leather Belting meets every challenge of hard drives and difficult places, such as mule drives, step-cone pulleys, tapered cone drives, quarter-turns, universal winder drives, etc.

Avoids Costly Equipment . . . Leather Belting is ready to use, in most cases, with existing pulleys. No need to buy and *wait* for expensive, hard-to-get special sheaves and pulleys.

Immediately Available . . . Adequate and diversified stocks of Leather Belting are on hand. This native material, grown and processed right here, faces no shortage, no "priorities." You can depend on quick delivery.

Elastic . . . Leather Belting absorbs shock between power source and applications, because it is elastic. Saves wear on motor and machine bearings, preserves machine accuracy.

Joined with Perfect Splice . . . No other belting material can be made endless on the job as perfectly as Leather—splices that can be relied upon, that do not break or wear out pulleys.

Longer Lived . . . Leather is a *natural*—not a manufactured—substance. Will not separate or disintegrate. Because it is more durable, modern Leather Belting lasts longer.

Improves with Age . . . Modern Quality Leather Belting is unsurpassed to start with; and as it gets "set" to the pulley and limbered up, its efficiency improves with age. There is no special traction surface to wear off and lose in efficiency. It's leather all the way through.

AMERICAN LEATHER BELTING ASSOCIATION
53 Park Row, New York, N.Y.

AMERICAN LEATHER BELTING ASSOCIATION — GRIPS LIKE A HAND — RELY ON THE GRIP OF LEATHER — PULLS LIKE A TRACTOR

Rely on Leather Belting

1866 1941
75th Anniversary
STEIN-HALL

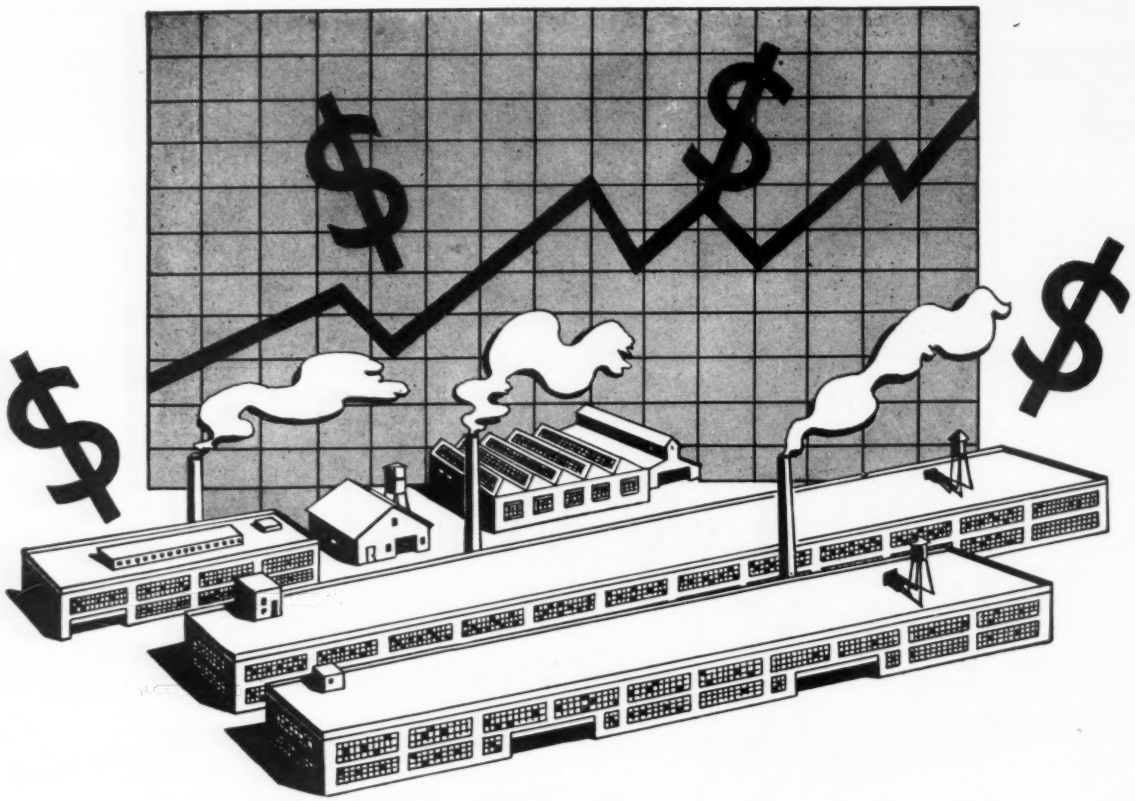
We've Been Through Two Wars!

Experience is a wise teacher. ★ Our 75 years of experience have taught us how best to serve our customers through periods of economic confusion. ★ Through the Spanish-American and the World War our strength was increased by consistent adherence to a policy of fair service to all customers. ★ Today we face the present and the future with firm confidence because our faith in that policy is unshaken. Our customers in turn have faith in our ability to supply highest quality textile starches . . corn, potato, wheat . . backed by service which proves our sincere and constant effort to protect their interests.

★ ★ SH ★ ★

STEIN, HALL & COMPANY, Inc.
285 Madison Avenue · New York
1011 Johnston Bldg. · Charlotte, N. C.
LABORATORIES AT . . NEW YORK · CHICAGO · CHARLOTTE · PROVIDENCE · LONG ISLAND CITY, N. Y.

★★ A TEXTILE STARCH FOR EVERY TEXTILE PURPOSE ★★



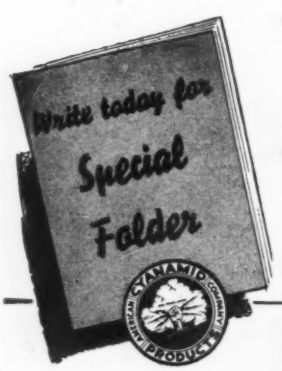
Let *DECERESOL Help You Increase Your Plant Production Capacity—Profitably

Hundreds of mills are saving time, effort and money in many processes in which wetting, emulsifying and dispersing are a part—through the use of DECERESOL—the most powerful wetting agent available.

Following are some of the steps in which it meets the increasing demand for speed and efficiency in textile production:

Wetting out grey cotton piece goods
In mixing liquid soaps with strong detergency
Wetting out goods prior to sanforizing
Adding to dyebath to increase penetration
Preparing raw cotton stock for dyeing
As a dispersing agent in dissolving dyestuffs
De-oiling or de-gumming raw cotton stock
In treatment of water prior to addition of dry starch
In "brown souring" for better penetration
In the oxidation of vat prints
The desizing of rayon or acetate piece goods

These are but a few of the *more than thirty* ways in which DECERESOL can help you speed up and modernize your processes profitably. Write for full information on DECERESOL.



Trade-mark of American Cyanamid & Chemical Corporation applied to wetting agents of its own manufacture.

American Cyanamid
& CHEMICAL CORPORATION

A UNIT OF AMERICAN CYANAMID COMPANY

30 ROCKEFELLER PLAZA • NEW YORK, N. Y.

DISTRICT OFFICES: 822 West Morehead Street, Charlotte, N. C.; 89 Broad Street, Boston, Mass.; 600 South Delaware Avenue, Cor. South Street, Philadelphia, Pa.; 20 N. Wacker Drive, Chicago, Ill.; Azusa, Cal.; Russell and Bayard Sts., Baltimore, Md.; 850 Leader Bldg., Cleveland, Ohio; 931 Fisher Bldg., Detroit, Mich.; Miller Road, Kalamazoo, Mich.; 900 Shell Bldg., St. Louis, Mo.

LOWER COSTS RESULT FROM SELECTING THE RIGHT BELT FOR EACH DRIVE

The completeness of the line of leather belting manufactured by Graton & Knight Co., makes it possible to select the one leather belt most suitable for individual drive conditions.

For continuously-operated production drives, Research Belting has been acknowledged "top" belt over a period of years; its low stretch and high transmitting capacity serve to increase average machine production. At least 3% increase is guaranteed.

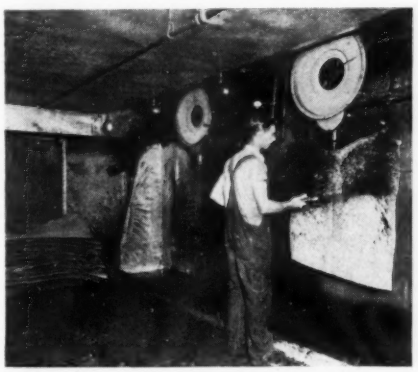
For pivoted motor base drives, Research Belting, with its low stretch, built-in pulley grip and extra pliability, is the ideal belt. Adjustments are fewer and belt life longer on the American and Rockwood or Browning types of motor base.

For shifting, step cone or flange pulley drives, the first-quality oak belt which is preferred is Graton & Knight's widely-used Heart-Oak. It is a firm-finished belt, made from the heart of the hide.

Where there are unfavorable operating conditions — such as heat, oil, acid fumes — the exclusive combination-tanned Spartan Belt is recommended.

G & K TANS OWN LEATHER

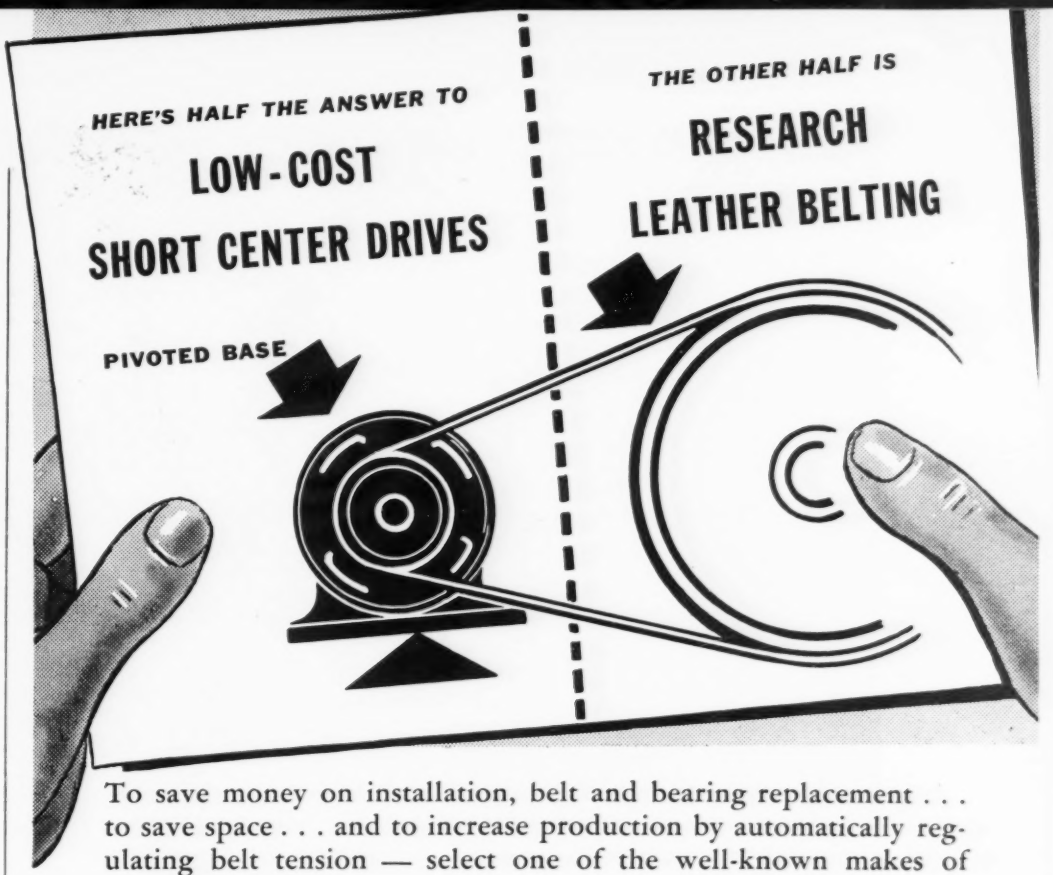
All these belts — in addition to Pryz-Oak (oak-tanned side stock for light drives), and special-purpose belting — are made from leather *tanned* by Graton & Knight. This affords a single source of control from green hide to finished product, and accounts for the uniform quality of Graton & Knight belts — which "turn more pulleys than any other make in the world."



G & K Tans and Curries Own Leather

FREE BOOKLET

A new booklet, "The Right Combination for Short-Center Drives" discusses the reasons why so many firms are selecting Research Leather Belting with pivoted motor base drive. Address Dept. D., Worcester, Massachusetts.



To save money on installation, belt and bearing replacement . . . to save space . . . and to increase production by automatically regulating belt tension — select one of the well-known makes of *pivoted motor base.*

And to get the *most* out of your pivoted base drive — use *Research Leather Belting . . .*

SAVINGS FROM 4 IMPORTANT FEATURES

1. **MORE GRIP.** The exceptional frictional surface built into Research gives you added production — 3% guaranteed.
2. **LESS STRETCH.** Research — with 50-75% less stretch — requires fewer adjustments of base . . . lowers maintenance costs.
3. **MORE FLEXIBILITY.** Research is so pliable that it hugs even small pulleys . . . eliminating slip . . . adding production.
4. **STRONGEST PLY ADHESION.** Tension-cementing eliminates ply separation despite constant flexing over small pulleys.

RESEARCH GIVES YOU:

More production		Better grip
Less maintenance	***DUE TO***	Less stretch
Longest belt life		Research tanning and finishing

A more expensive belt can't give you more.
No other belt can give you as much.

WRITE US for our new free bulletin on "The Right Combination for Short-Center Drives."

Graton & Knight Belting turns more pulleys than any other make in the world!

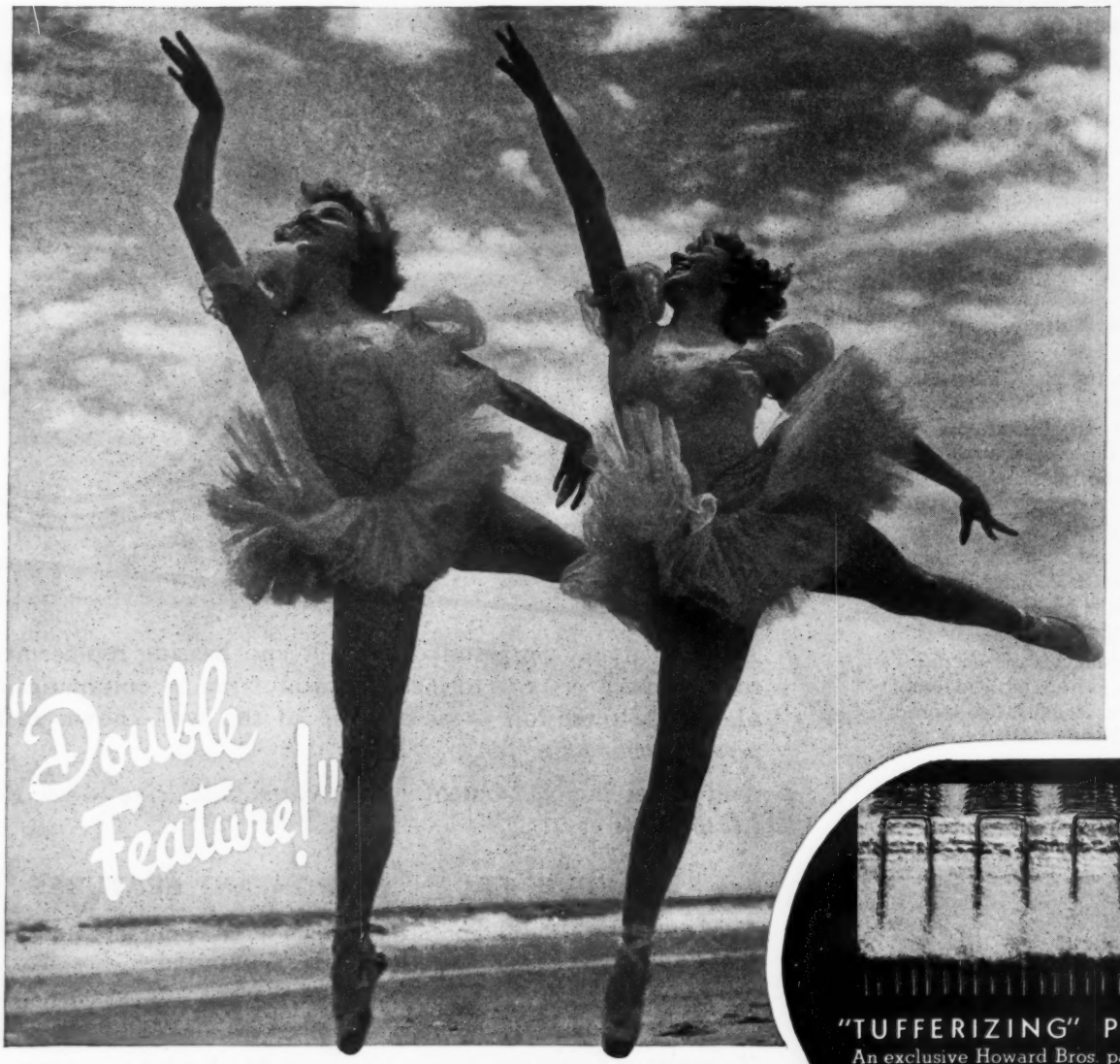
GRATON & KNIGHT CO.

Tanneries and Manufacturing Plant at
WORCESTER, MASSACHUSETTS

GRATON AND KNIGHT

We are the only leather belting manufacturer with complete nationwide service facilities. See page in THOMAS' REGISTER.

Complete line of flat leather belting . . . round belting . . . cements, dressings . . . lace leather . . . Spartan Packings . . . textile leathers.



Are you profiting from the

"Double Feature"

TUFFERIZED

U. S. PAT. NO. 2,174,178

CARD CLOTHING

Means Double Benefits to Carders!

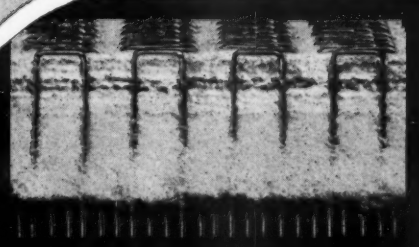
1

Saves grinding costs because the specially tempered wires hold their accurately ground point longer.

2

Tuffer gives you *better* carding . . . *easier* carding because of its scientific high quality construction.

Inspect your card clothing now! Is it worn? Need replacement? Call in your Howard Bros. representative. He will appreciate your business and show it by quick, careful service.



"TUFFERIZING" PROCESS

An exclusive Howard Bros. patented-precision-process, makes every wire staple seat squarely, flat, and firmly into the famous, TUFFER foundation. All wires are even in length, spaced uniformly and perfectly parallel at all times. Each staple cut clean, sharp, smooth and free from wire burrs. Uniformity impossible to get any other way.

TUFFER (PATENTED) FOUNDATION

is made of carefully selected and specially constructed cloths for our own particular use. Tested to be several times necessary strength, TUFFER foundation is "cushioned" just right to make the wire shock-proof to the constant hammering of the various stocks carded.

HOWARD BROS. MFG. CO.

WORCESTER, MASS.

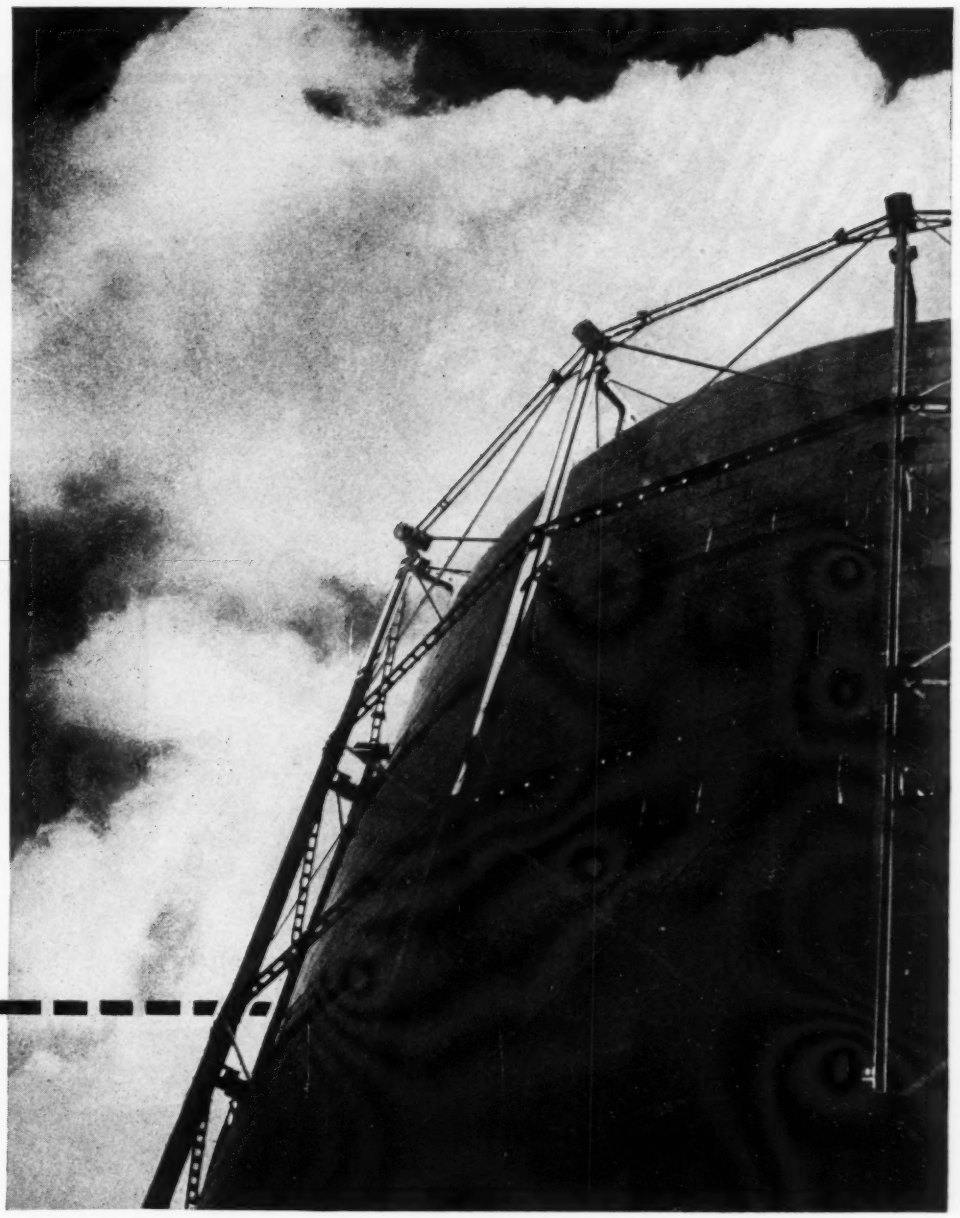
Southern Plants: Atlanta, Ga., Gastonia, N. C. **Branch Offices:** Philadelphia, Dallas

Canadian Agents: Colwool Accessories, Ltd., Toronto 2, Canada

1866 OUR 75th YEAR 1941

PRODUCTS: *Card Clothing for Woolen, Worsted, Cotton, Asbestos, and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Recovered and extra sets loaned at all plants • Lickerins and Garnett Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Inserted-Eye and Regular Wire Heddles.*

A DYEHOUSE PROBLEM THAT STARTED HERE



Again NATIONAL TECHNICAL SERVICE pioneers with the development of delustered acetate formulas that ensure satisfactory fastness to gas fading. All popular 1941 Fall Shades are included. Selected special shades will also be matched by our nearest branch upon receipt of your specimen swatch with sample of desired shade.

NATIONAL ANILINE & CHEMICAL COMPANY, INC.

40 RECTOR STREET — **NEW YORK, N. Y.**

BOSTON . . . . 150 Causeway St.	SAN FRANCISCO . . 517 Howard St.	NEW ORLEANS Masonic Temple Bldg.
PROVIDENCE . . 15 Westminster St.	CHARLOTTE . . 201-203 W. First St.	CHATTANOOGA . . . James Bldg.
CHICAGO . . . . 357 W. Erie St.	GREENSBORO Jefferson Standard Bldg.	PORTLAND, ORE. , 730 West Burnside
PHILADELPHIA . 200-204 S. Front St.	ATLANTA . . . . 140 Peachtree St.	TORONTO 137-145 Wellington St., W.

BRANCHES AND DISTRIBUTORS THROUGHOUT THE WORLD

COMPLETE Manufacturing Control - That Begins In Our Own TANNERY

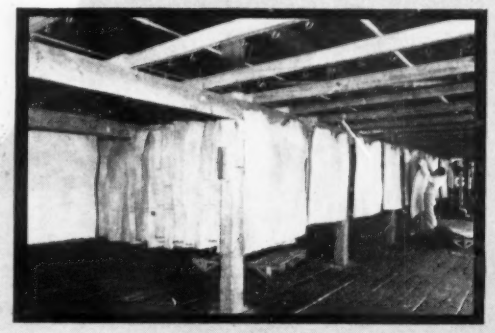
• Our Tannery at Norcross, Ga., with a capacity of 20,000 hides per year.

• View in our tan-yard, where hides are tanned under continuous laboratory control.

● By operating our own tannery, we are able to build quality into SOUTHERN Leather Belts *from the ground up.* We put pulling, gripping and wearing qualities into the *leather,* rather than trying to add them to the leather in manufacturing the belt.

Our complete control of *every* manufacturing operation not only assures you of the quality and uniformity of SOUTHERN Belts — but enables us to build belts especially designed to suit your *individual* needs.

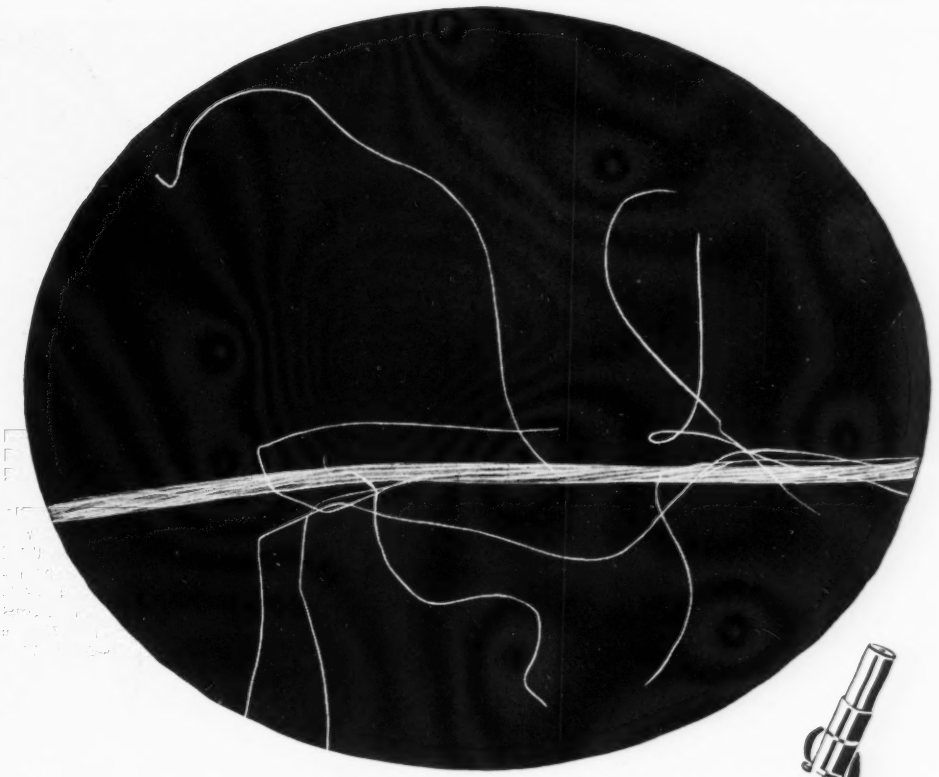
• After tanning and finishing, leather is hung for curing and drying.



Southern Belting Company

Manufacturers **Atlanta, Georgia** **Distributors**

Leather Belting	Rubber Belting	V-Belts and Sheaves	Fiber and Metal Pulleys	Rockwood-Southern Pivoted Motor Drives	Reeves Variable Speed Transmissions



Ravagers...

. . . deadly broken filaments! Hardly discernible to the naked eye, but just see what microscope and camera show—the broken filaments, like savage tentacles, ready to reach out and inject their treachery into weaving mill operation. They form puff balls behind the drop wires and reed, pick up dirt, cause mispicks and overshots and result in breaks that produce excessive loom stoppage.

Just as medical research has found antidotes for ravaging diseases, so scientific research has developed the revolutionary "Continuous Process" by which Industrial virtually eliminates broken filaments by eliminating their causes. Spun-Lo yarn, made by this process, is spun, bleached, dried, treated and twisted "continuously" without once being touched by a human hand. Result—as any mill man who has run "Continuous Process" Spun-Lo can tell you—less loom stoppage, fewer seconds, better cloth, lower production costs. The whole story is in *"Uniformity Rides the Reels".

*Write for your copy of the booklet "Uniformity Rides the Reels", which describes the "continuous process" in detail.

"Continuous Process"

Spun-lo Rayon

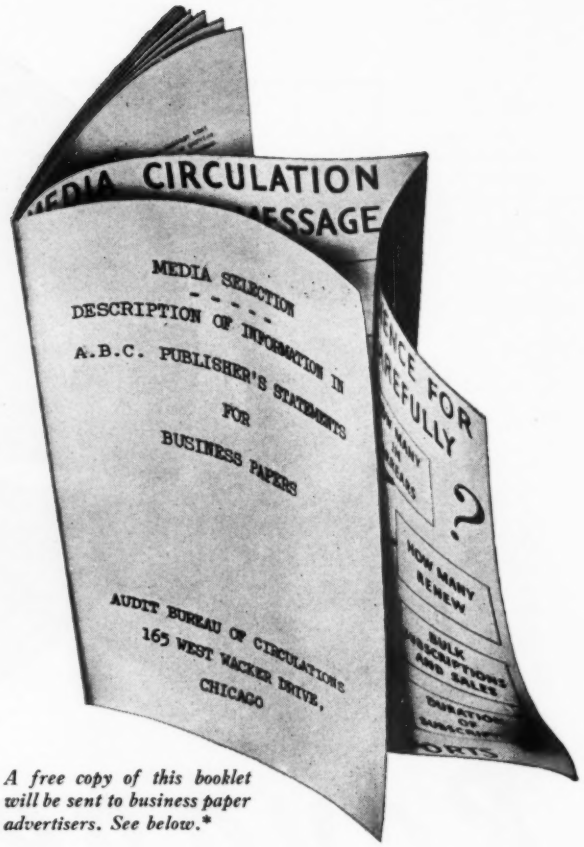
Reg. U. S. Pat. Off.

INDUSTRIAL RAYON CORPORATION • CLEVELAND, OHIO

NEW YORK OFFICE • 500 FIFTH AVENUE

TO Advertisers–

HOW OUR MEMBERSHIP IN THE AUDIT BUREAU OF CIRCULATIONS PROTECTS YOUR ADVERTISING INVESTMENT.



*A free copy of this booklet will be sent to business paper advertisers. See below.**

THE Audit Bureau of Circulations is a cooperative and non-profit association of more than 2000 publishers, advertisers and advertising agencies.

The Bureau has established definite standards for measuring circulation on a quantitative basis for qualitative appraisal. Its reports provide information that advertisers need in order to select the right media. And they give buyers assurance that they get what they pay for.

Skilled auditors make a detailed annual audit of the circulation records of each publisher member. Based on these audits, the Bureau issues A. B. C. reports which tell how much circulation a publication has, where it goes, how it was obtained, how much subscribers paid for it, their occupation and business, and many other facts essential to the wise investment of advertising money.

Only publications with paid circulation are eligible for membership in the Bureau. The net paid circulation shown in A. B. C. reports is evidence of reader interest.

*How to make the most of the information in A. B. C. reports for business papers is described in a booklet on media selection which has recently been issued by the Bureau. It outlines in detail the helpful information that will enable you to select the right media and know that you are getting what you pay for. Write today for your free copy of this booklet.

A. B. C. PROTECTS YOUR ADVERTISING

Paid subscriptions, renewals, evidence of reader interest, are among many facts in A. B. C. reports that are definite guides to effective media selection. When you buy space in A. B. C. publications your advertising is safeguarded by audited circulation. Always ask for A. B. C. reports.

COTTON

Member of the Audit Bureau of Circulations ABC *Ask for a copy of our latest A.B.C. report*

A. B. C.=AUDIT BUREAU OF CIRCULATIONS=FACTS AS A MEASURE OF CIRCULATION VALUES

THE order is out to U.S. plants: "Step on the gas! Speed is *vital!*"

Your workers need maximum light for top speed, accurate results. Yet you can't afford to take time out for a two- or three-coat paint job. You need a mill white that goes on FAST!

You need DULUX High-Hiding Mill White. It goes on fast . . . it often does the job with ONLY ONE COAT!

With DULUX the paint crew goes down the line *once.* Production returns to normal much faster than if several coats were needed. With DULUX you save plenty on material and labor costs, too.

You give your workers brilliant light reflection with DULUX. It reduces seconds . . . your production costs drop. And because of its durability DULUX *keeps* its intense whiteness. This durability stretches the time between repaintings, greatly reduces your paint overhead. Find out more about DULUX High-Hiding Mill White *today!*

E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington, Delaware.

SEND IN THE COUPON TODAY FOR COMPLETE INFORMATION.

E. I. du Pont de Nemours & Co. (Inc.)
Finishes Div., Dept. C-91, Wilmington, Del.

Please see that I get complete information about DULUX High-Hiding Mill White.

Name.....

Firm Name.....

Address.....

City.....

State.....

6 ALUMINUM, DEFENSE, AND YOU

ALCOA ALUMINUM

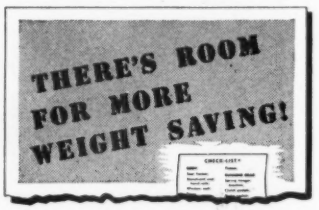
DEFENSE ISN'T JUST AIRPLANES!

They are first in the hearts of the people and first in the headlines. But Defense is also ten thousand other military necessities, clear across the board, and Alcoa Aluminum goes all the way across with it.

Sheets and shapes and wire; castings and extrusions and forgings, nuts and bolts and tubing and rivets; all these and more forms of Alcoa Aluminum are being chewed up by scores of industries in military applications as varied as the peace-time applications of aluminum used to be.

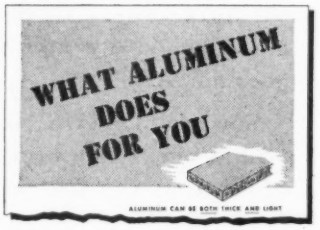
AND FOR THE SAME REASONS.

Before Defense, one of our advertisements to civilians started off with the headline reproduced at the right. A whole volume of economic and engineering common sense was distilled into those six words. Now, Defense is taking all the aluminum we can make because that headline is a fact.



THIS IS WHAT we were saying, B*efore Defense*, to prospective buyers of Diesel engines. A great new industry was feeling its way. Properly, it was weighing the advantages of using Alcoa Aluminum. But Defense had to have those advantages right away, and civilian users of Diesels now have to wait for their aluminum.

THE FIVE WORDS in the headline of this advertisement (B.D.) at the right introduced straight talk about the fundamentals of weight saving with Alcoa Aluminum: vital reasons we thought (and think) that everybody should know. Defense hasn't time to explain that these are precisely its reasons for using aluminum; it just takes all it can get.



LAST MONTH DEFENSE TOOK over 50 million pounds of Alcoa Aluminum, for the simple and clear reason that certain advantages of aluminum are fundamental.

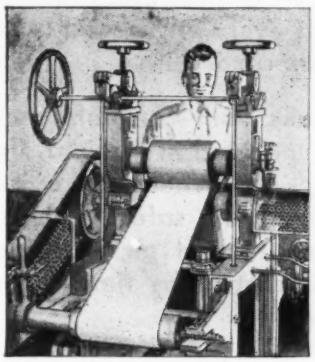
When the emergency is over, Alcoa is going to be talking the same simple language, selling the same fundamentals. And it will have still better techniques and new uses of Alloys of Alcoa Aluminum for you to put to work.

RIGHT NOW, we are in high gear for defense; our foot is on the floor board; we intend to keep it there for the duration.

ALUMINUM COMPANY OF AMERICA

NAPENIZE

The Positive Anti-Mildew Treatment



EASY TO APPLY

NO LOSS OF TENSILE STRENGTH

INEXPENSIVE TO BUY

CUSTOMER SATISFACTION

Processors who NAPENIZE their canvas products can count on all four of the advantages listed above. Because of the physical affinity of the chemical compound for the cloth, there are definite assurances of:

1—Enduring Protection
2—No Waterproofing Required to Retain the Fungicide
3—Retention of Effectiveness During Exposure to Elements

Complete information and specifications on this positive anti-mildew treatment will be supplied processors on request. Write Dow today.

Working with you for America!

DOW THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

Branch Offices: New York, St. Louis Chicago, San Francisco Los Angeles, Seattle, Houston

Stop Costly Air Leaks

with

LUNKENHEIMER

AIR CONTROL DEVICES

Fig. 1571 Air Cock
150 lb. Pressure

Air Nozzles
Non-Metallic Disc
Fig. 1840-PT, Hose End
Fig. 1841-PT, Pipe End
150 lb. Pressure

Fig. 635, Regrinding
Quick Operating Valve
200 lb. Pressure

Fig. 1837, "N-M-D"
Quick Operating Valve
150 lb. Pressure

Fig. 123, "N-M-D"
Globe Valve
150 lb. S. P.

Pop Safety Valves
for Air
Fig. 1226, Top Outlet
5 to 250 lb. Pressure

Fig. 1616
Air Compressor Check Valve
200 lb. Pressure

Are you losing money because of leaks in your compressed air lines? Even a tiny leak the size of a pin hole may be stealing some of your profits—losses which can easily amount to a substantial sum at the end of a year.

Study the startling facts in the "Cost of Air Leaks" chart below. The figures indicate what may be going on in your plant for air leaks cost money and every unchecked leak increases your operating costs.

Stop these costly leaks with Lunkenheimer Air Control Devices. Included in the line are air cocks, air nozzles, globe, check and quick operating valves, and pop safety valves. They are a sure way to end air wastage and they'll pay their cost many times over in the savings they make.

ESTABLISHED 1862

THE LUNKENHEIMER CO.

"QUALITY"

CINCINNATI, OHIO. U. S. A.

NEW YORK CHICAGO
BOSTON PHILADELPHIA

EXPORT DEPT. 318-322 HUDSON ST., NEW YORK

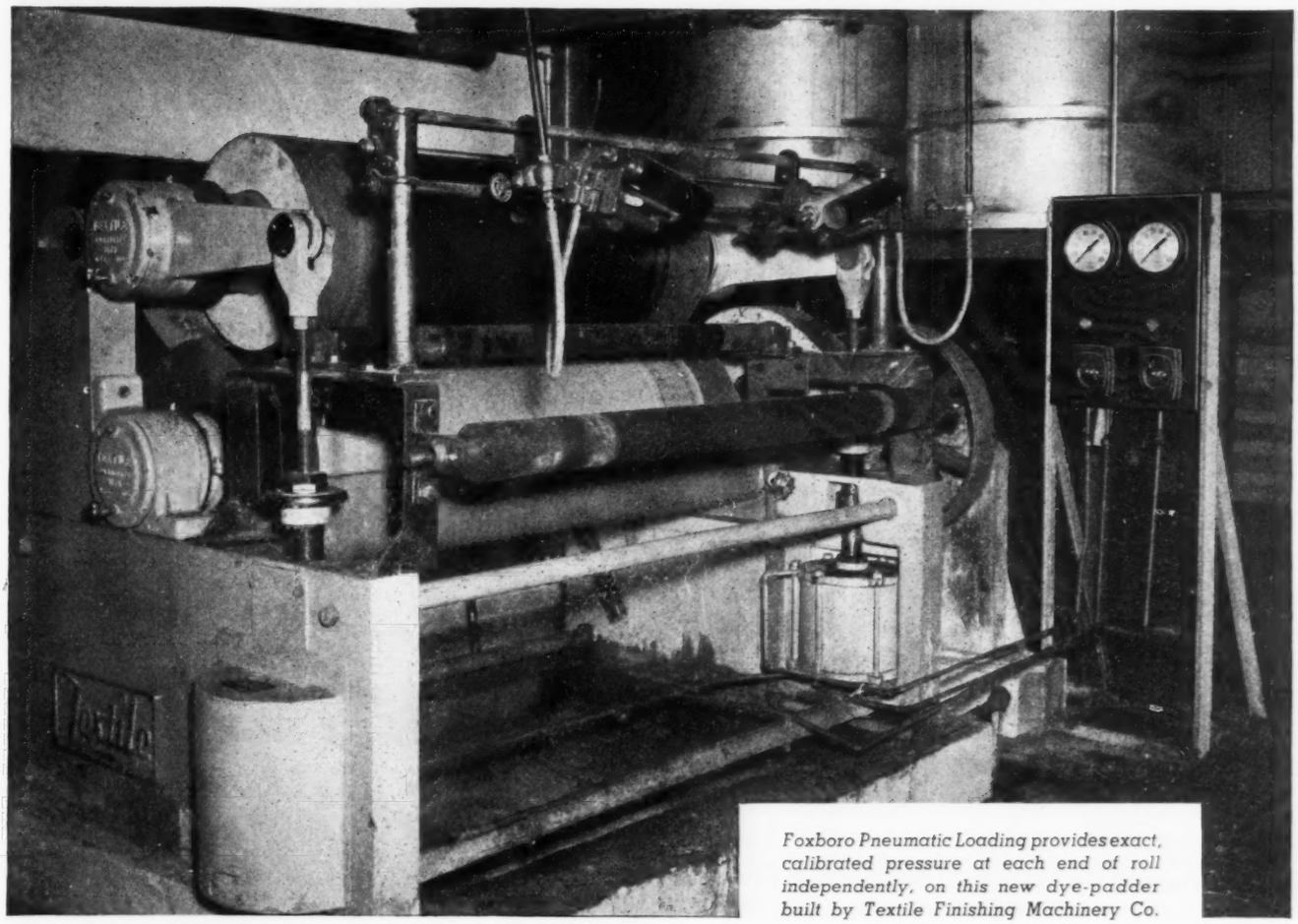
THE COST OF AIR LEAKS . . .

AREA OF LEAK	AIR	
Diameter, Inches	Number of cubic feet per month at 75 lb. pressure	Total cost of waste per month 11c per 1,000 cubic feet
1/2"	13,468,000	$1,481.44
	7,558,500	831.44
3/8"	3,366,990	370.37
1/4"	824,570	90.70
1/8"	213,000	23.43
	52,910	5.82

Enlarged copies of this chart available on request.

For full information on the complete line of Lunkenheimer Air Devices send for copy of Catalog 78.

Buy from your local Lunkenheimer distributor! He is cooperating in every way to give you the kind of service you so vitally need for the National Defense Program.



Foxboro Pneumatic Loading provides exact, calibrated pressure at each end of roll independently, on this new dye-padder built by Textile Finishing Machinery Co.

Solving *Production "Bugs" That Defy Usual Methods!*

Today, a wide variety of textile processes – from the simplest to the most difficult – can be operated with new cost-cutting, quality-boosting exactness through use of Foxboro Instruments.

The reason is, that Foxboro Instruments are designed by men who know the industry's processes and problems from the bottom up. Their long experience has enabled them to develop, not only standard instruments of new high accuracy for textile measurement and control service, but also complete new instrument systems where special tasks must be performed better.

A typical example of these new systems is Foxboro Pneumatic Loading for dye-padders, mangles and mercerizers. Operating automatically after initial setting, this original Foxboro Instrumentation System maintains exact calibrated pressure at each end of the squeeze-roll independently. It eliminates squeeze-variations, bouncing of out-of-round rolls, and costly maintenance . . . all the "bugs" of hydraulic, weight or screw loading!

Write for detailed information on Foxboro Pneumatic Loading Systems or Foxboro Instrumentation for any other textile operation. **The Foxboro Company, 18 Neponset Ave., Foxboro, Mass., U. S. A.** Branch offices in principal cities of United States and Canada.

FOXBORO

REG. U. S. PATENT OFFICE

Creative Instrumentation

Cottons come to full bloom

when you use

MODINAL* D

for soaping
dyed or printed goods

Check the improvements in results and the saving in time made possible by MODINAL D, new double-strength fatty alcohol sulfate. In the case of cotton goods, the following outstanding advantages are obtained:

BRIGHTER DYEINGS *and prints are obtained by the full development of colors.*

CLEARER WHITES *are produced on prints.*

ELIMINATES SCUM FORMATION *due to acid or metallic salts carried over into the soap compartment.*

RINSING MADE EASIER; *careful control not essential with Modinal D.*

SANFORIZING BLANKET *does not accumulate deposits—Modinal D saves time.*

▶ May we send you full information or have one of our experienced technical men call to discuss the money-saving advantages of this modern synthetic detergent?

*"Modinal" is the trade-mark used by the Gardinol Corporation to designate a group of its fatty alcohol sulfates.

GARDINOL CORPORATION · General Offices, Wilmington, Delaware

SALES AGENTS

Procter & Gamble, Cincinnati, Ohio
E. I. du Pont de Nemours & Co. (Inc.), Wilmington, Delaware

DUST & SOOT

YOUR DIRTY COMPETITORS

Dust and soot observe no rules of etiquette. They are your most ruthless competitors—cutting into your profits by smudging freshly dyed yarns, causing streaking and discoloring in the spinning operation or building up returns due to spoilage in bleaching and finishing.

Many textile mills are today stopping these losses by the use of air filters specifically designed to collect the finest air borne particles of soot and dust which seep in from outside.

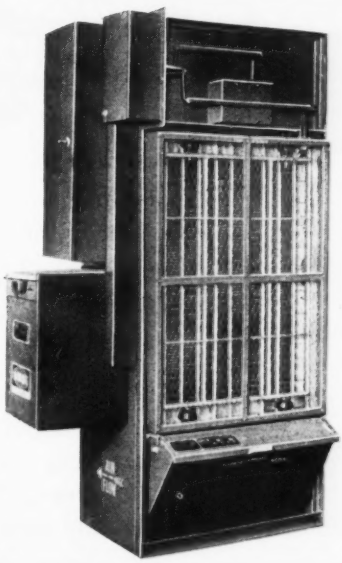
AAF Engineers have made special studies of textile mill dust problems and can recommend dust collecting equipment and engineer systems to take care of any unusual conditions that might be present. Ask your air conditioning consultants to investigate some recent AAF installations for you or write for the address of our nearest engineer. Free bulletins will be forwarded without obligation. Use the coupon.

AMERICAN ELECTRO-MATIC FILTERS KEEP DUST, SOOT, SMOKE OUTSIDE

The development, by AAF Engineers, of a practical application of electrical precipitation to an automatic self-cleaning air filter has brought modern air cleaning one step closer to the ultimate goal of dust-free air.

Since electrical precipitation employs the principle of electrical attraction, it is effective with much smaller and lighter particles than can be collected by mechanical forces. By this method it is possible to remove from the air a high percentage of particles as small as tobacco smoke which averages about .27 microns in size.

Combining mechanical and electrical principles has made it possible to obtain a high cleaning efficiency over the entire range of dust particle sizes from smoke at the lower end of the scale up to the largest air-borne solid. Such high efficiency is desirable wherever smoke and fine dust particles cause deterioration or spoilage.



An exclusive advantage of the Electro-Matic filter is its self-cleaning feature which assures a constant, uniform air volume at all times and permits continuous operation without interruptions for manual maintenance. Another advantage is that by combining filtration and precipitation the Electro-Matic will continue to operate as an efficient viscous filter in case of power failure or when the air supply system is not in use at night or during the week-ends.

AAF *Free* BULLETIN SERVICE

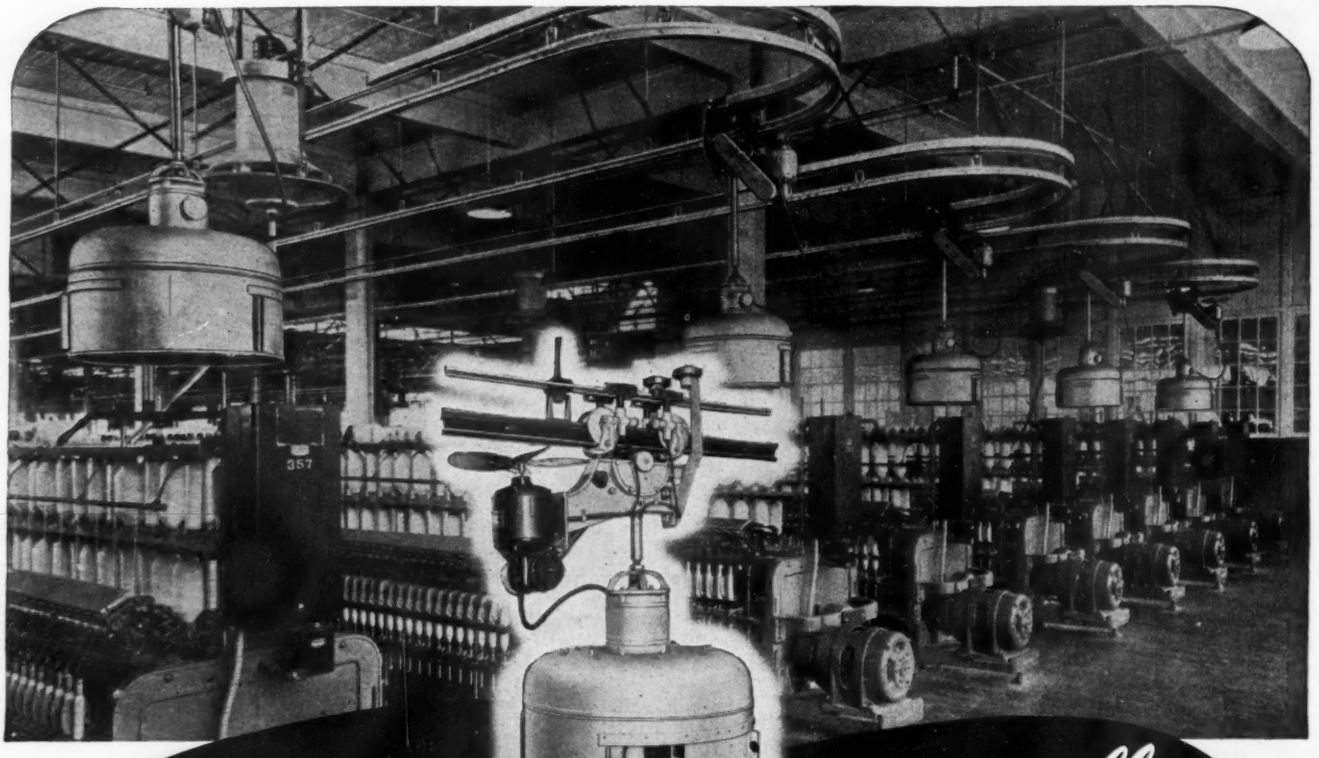
AMERICAN AIR FILTER CO., INC.
Incorporated
270 Central Ave., Louisville, Ky.

Please send me free Electro-Matic Bulletin No. 250 D.

NAME .....

COMPANY .....

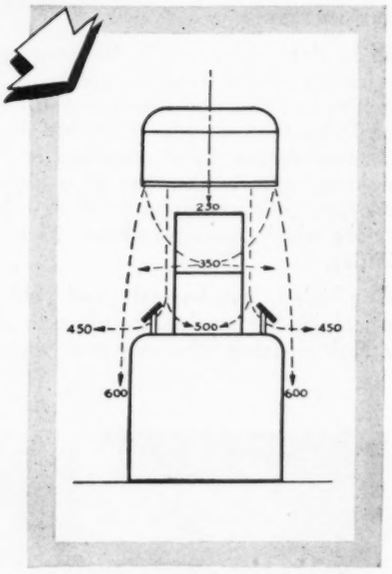
CITY ..... STATE .....



CLEANING IS DONE *Better, Quicker* AND *More Economically* WITH AMERICAN MONORAIL *Automatic* OVERHEAD CLEANERS

IN many mills, hand cleaning has given away to automatic cleaning. Over spinning, winding, twisting and warping machinery, American MonoRail Automatic Overhead Cleaners have proved successful in cleaning frames and ceilings and preventing accumulation of lint. With this scientifically designed blower that passes at short, regular intervals over the machine, supplying swirling currents of air, carefully directed and adjusted to meet varying conditions, hand cleaning is greatly reduced. Automatic cleaning keeps machines producing full time, enables operators to increase their output and reduces the number of gouts or bunches in the yarn.

Let an American MonoRail Engineer explain further advantages and economies of "Controlled Cyclonic Cleaning" or write for copy of 24-page book.



Indicates average values of air currents in feet per minute. Correct velocity where needed most . . . note that the highest velocities circulate around the bottom creel board and the roll stands.

THE AMERICAN MONORAIL CO.
13106 ATHENS AVENUE **CLEVELAND, OHIO**

SEP 20 1941

SEPTEMBER, 1941
Volume 105 Number 9

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Editorial and Business Offices
GRANT BUILDING
ATLANTA, GEORGIA

COTTON
SERVING THE
Textile Industries

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Protect YOUR MOTORS AGAINST BURNOUTS

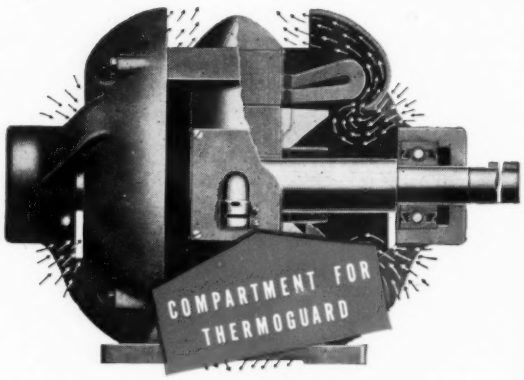
WITH *THERMOGUARD-EQUIPPED* MOTORS

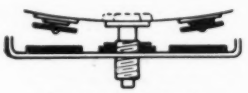
Machines driven by Westinghouse Thermoguard-equipped Textile Motors are protected against production tie-ups due to burnouts from overheated or overloaded motors.

Before motor windings can reach an unsafe temperature, the Thermoguard operates, removing motor from line. Its action depends only on motor temperature. The Thermoguard enables full production from machines, with assurance that motors will be taken off the line before reaching an unsafe temperature.

Space behind the conduit box permits optional addition of Thermoguard to Westinghouse Lint-Free Motors. Write for new folder, DD-3175. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., Dept. 7-N.

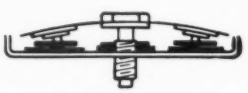
Westinghouse Lint-Free Motors are designed expressly for textile machine drives. Smooth surfaces inside skeleton frame won't hold lint. Wide air passages give free circulation, permit easy inspection. Prelubricated, self-sealed ball bearings eliminate expense of frequent lubrication.





CLICK! IT'S OFF!

Bi-metal Thermoguard disc opens with rifle-bullet speed when dangerous heat is reached within motor, producing two breaks in series, disconnecting the power or operating an alarm.

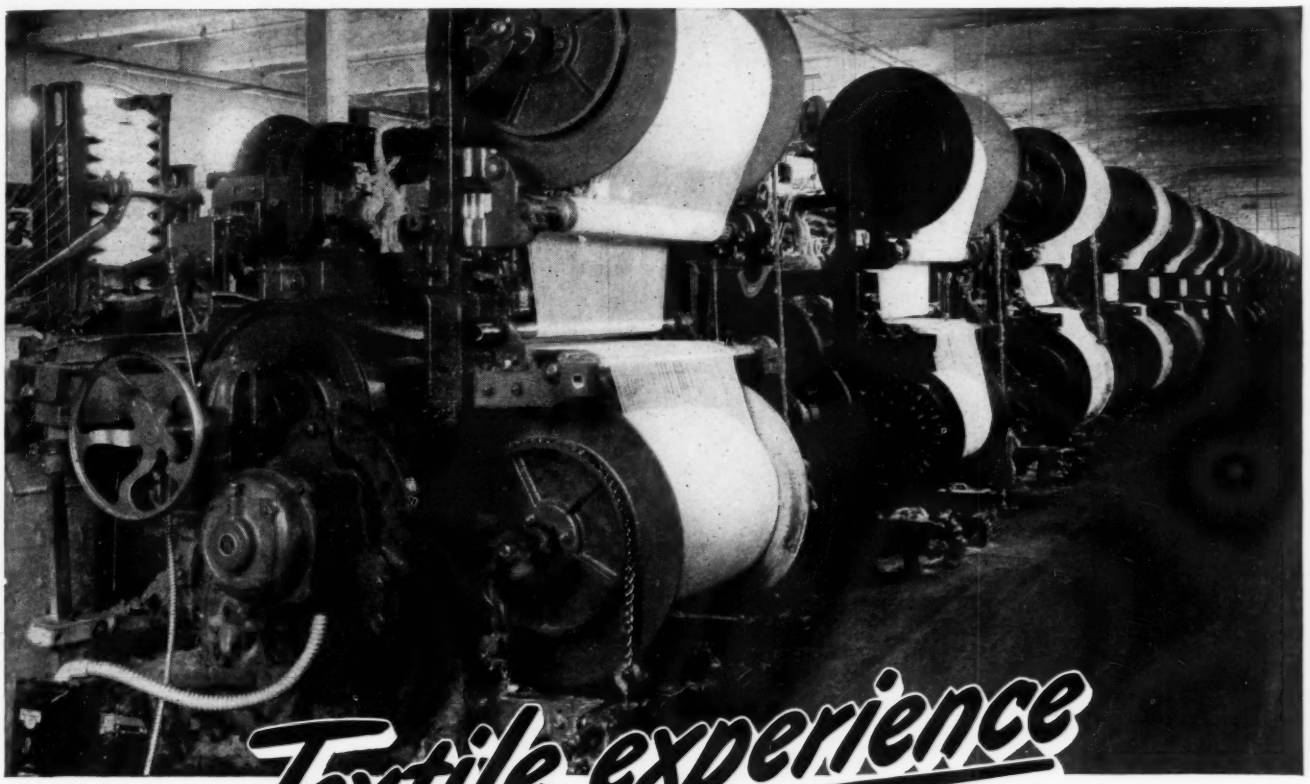


CLICK! IT'S ON!

When motor cools to safe temperature, Thermoguard permits motor to be started again.

J-21160

Westinghouse
LINT-FREE MOTORS



Textile experience gives you better loom motors

IMPROVED EFFICIENCY OF WESTINGHOUSE MOTORS FOR MODERN HIGH-SPEED LOOMS GIVES MORE YARDS PER KILOWATTHOUR

BECAUSE their efficiency is maintained at a high point throughout the entire pick cycle, Westinghouse Loom Motors cut your current costs. They are especially designed to take peak loads with less power. They have ample reserve capacity for "breaking in" periods. Unit frame construction and vibration-proof fittings save maintenance, and their extra ruggedness means longer life.

You get these benefits from Westinghouse equipment because Westinghouse engineers are "textile minded." They know what electrical equipment must be able to withstand in textile service—and they know how to build equipment that can "take it."

That's why it always pays to consult the local Westinghouse office for any electrical requirement. Try it, for quick, capable action.

WESTINGHOUSE ELECTRIC & MANUFACTURING CO.
EAST PITTSBURGH, PA.

J-94382-A

HE KNOWS HIS BUSINESS

The Westinghouse Service Man knows "what to do about it" when he gets a call from a textile mill. His factory training and practical experience enable him to give you a quick answer in emergencies. And to help you, he is on call day and night through our local service station.

Westinghouse
LOOM MOTORS

THE CIBA LABORATORY
Exists to Serve You
Ciba Chemists, Colorists and Service Technicians are ready at all times to co-operate with you in the solution of your problems. Please feel free to call upon them.

INDIGOID VAT COLORS?

Modern production methods have raised these reliable time-tested, vat colors to new standards of excellence. In many instances, where the absolute maximum of vat color fastness is not essential, these Vats of the Indigoid Series will warrant your consideration.

They combine AVAILABILITY, VERSATILITY, ECONOMY

CIBA	Orange	R
"	Pink	FF
"	"	B
"	Red	3B
"	"	R
"	Scarlet	G
"	Blue	2B
"	"	BR
"	Brown	G
"	Violet	B
"	"	R
Midland Vat	Blue	R

CIBA Company Incorporated

Sole Representatives of · SOCIETY OF CHEMICAL INDUSTRY IN BASLE

Vat Dyes of · THE DOW CHEMICAL COMPANY

P. O. BOX 25 — STATION C.
GREENWICH & MORTON STS.
NEW YORK

BOSTON · CHICAGO · MONTREAL · CHARLOTTE
PROVIDENCE · SAN FRANCISCO · PHILADELPHIA

SHORTS AND REMNANTS

● With all of the trouble textile mills are having in getting deliveries on machinery, equipment and supplies, the following anonymous poem seems so appropriate that we took the liberty of swiping it from the August issue of "Rayon Organon"—Stanley B. Hunt, Editor:

YOUR BACK ORDER

Keep your temper, gentle sir,
Writes the manufacturer,
Though your goods are overdue,
For a month or maybe two,
We can't help it, please don't swear,
Labor's scarce Rayon's rare.
Can't get steel, can't get dies,
These are facts, we tell no lies.

Harry's drafted, so is Bill,
All our work is now uphill,
So your order, we're afraid,
May be still a bit delayed,
Still you'll get it, don't be vexed,
Maybe this month, maybe next,
Keep on hoping, don't say die,
We'll fill your order bye and bye.

Orchids For Louis Allis Co.

We had numerous compliments and several requests for reprints on the attractive inserts as carried in June, July and August issues by The Louis Allis Company of Milwaukee, Wis. These were entitled, "The American Eagle", "The American Flag", "The American Creed". Reprint requests included one from the branch office of a competitive motor manufacturer, whom we won't mention by name for fear of making his face red. A typical comment is the following from Roy K. French, industrial superintendent, Attica (N. Y.) Prison:

"The pictures appearing in your magazine COTTON of late in connection with the advertisements of the Louis Allis Company represent such splendid workmanship and thought and are so extremely opportune that I respectfully suggest that in the future you arrange for succeeding prints to be so placed in the magazine as to be easily removed. It is my belief that many, like myself, are desirous of having these pictures framed and it is a shame to have to cut them from the magazine."

◆

More Bleachers' Needles

B. B. Scantland of the Charlotte office of Textile-Finishing Machinery Company, was the winner of a handsome engraved $1.00 check for being the first to come forward with a reply regarding the question on bleachers' needles. Maybe we should head this "No bleachers' needles," as apparently they are no longer available because of the war. Mr. Scantland writes in part as follows:

"I am enclosing a sample needle that is used in bleach houses where piece goods are handled. These needles are used to quickly stitch together 'break outs' or ends of piece goods while in rope form in the bleach house. In certain instances it is satisfactory and quicker to do this instead of making the seam with a single needle pedal type sewing machine that is commonly used in piece goods finishing plants. These needles are packed in small boxes marked as follows: 'Quality 5061, John James & Sons, size 106, No. 10, Redditch, England'."

◆

Well, Not Exactly All

"I am anxious to get a list of all manufacturers of bobbins, spools and quills. . . . I assume that your list of advertisers pretty well covers that field . . ."

E. M. HILL

Greensboro, N. C.

More "Knitter Hints"

In addition to the original request received for the full-sized pictures illustrating right and wrong of knitting practices, as published in our Knitting Section, further requests include those from the Royal Hosiery Company, Inc., Rossville, Pa.; West Chester Hosiery Mills, Inc., West Chester, Pa.; Royal Oak Hosiery Mills, Marion, Va.; Prestige Limited, East Brunswick, Victoria, Australia; Propper-McCallum Hosiery Co., Inc., Northhampton, Mass.; and Princeton Knitting Mills, Watertown, Conn.

Typical comments on these photographs which are designed for use on the bulletin board include such as these from L. E. Frye, Supt., Carroll Silk Hosiery Mills, Hillsville, Va.—"They immediately attract attention and have proved to be very impressive and beneficial," and from R. P. Shapard, Jr., Pres., Spalding Knitting Mills, Griffin, Ga., "These do a great deal of good and it is something we should have stressed a long time ago. With yarn having become as expensive as it is, articles such as this do more good now than the average person would imagine."

◆

Where to Buy

"We are interested in ball bearing comb boxes for the cards here in our plant . . ."

C. D. MOSS

Purchasing Agent,
Merrimack Mfg. Company
Huntsville, Ala.

"We would be interested in getting in touch with some of the equipment manufacturers who could apply this method ["Pneumatic Loading of Textile Machinery"—April 1941—page 67] to existing machines."

W. V. BOYD

General Manager,
Canadian Cottons, Ltd.,
Montreal, Canada.

"In a recent issue of COTTON I noticed some discussion regarding the compressing of card sliver with an increase in the weight per can. Would you be kind enough to advise me who is handling this . . ."

R. T. McWADE

Superintendent
Joseph Bancroft & Sons Co.
Reading, Pa.

"Muy senores nuestros:

"Tendriamos mucho interes que nos facilitara todos los documentos necesarios para la aplicacion del Randon para la industria de hilanderia de algodon . . ."

GERENTE

Soc. Textil del Pacifico
Santiago, Chile, South America

◆

Line Forms at Right

Many readers will sympathize with the following plaintive paragraph in a letter received in late July from the head of a large southern mill:

"What with Mr. Leon Henderson, the power shortage, and the present situation as to rayon staple fiber, running a mill isn't much fun. Do you know of any good place where we could go fishing?"

Book To Sell More Leather Belting

One of our advertisers, American Leather Belting Association (McLain Organization Agency) has just issued a book which should be helpful to all leather-belting salesmen, either direct factory representatives or mill supply salesmen. Starting out with the avowed intention "To Help You Sell More Leather Belting," this book outlines the 1941 advertising and promotional campaign of the Association, which includes some 69 manufacturers contributing to the current campaign. It outlines the purpose of the advertising and what is included in the way of publications, direct mail, house organs, literature, and editorial publicity, on advantages of leather belting and the improvements being made. Featuring the theme of "Rely on Leather Belting", advertising is appearing on the "Production Drive", and "Modern Group Drive" in a number of general industrial papers, and in COTTON, *Serving the Textile Industries*.

The textile industry is probably the largest industry from the standpoint of major machines in the United States and the inclusion of COTTON in this campaign insures the assistance of this effort for the many belting salesmen selling to this industry. To the American Leather Belting Association, thanks for including textiles and COTTON in this booklet and congratulations on a very worthwhile promotion piece. If any belting salesmen haven't received a copy of it, please write the Association.

New Atlanta Plant for Union Special Machine Co.

P. T. McLendon, Atlanta district manager, wielded the shovel at the official groundbreaking exercises staged by Union Special Machine Company on the site of a new Atlanta plant and warehouse they will build at Spring St. and Biltmore Place, to be ready by January 1, 1942. It will greatly expand the company's facilities for serving the southern trade, and Capt. T. S. Whitsel, sales manager of the company, who assisted Mr. McLendon in the ceremonies, remarked very favorably on the splendid volume of business being obtained in the southern territory, which called for this expansion of their services.

A large number of manufacturers and suppliers, attending the Southern Garment Manufacturers Association meeting in Atlanta at the time of the ceremonies, were present and took part in the ground-breaking. The snapshot shows Mr. McLendon (center) greeting the first of a line of garment men, having just greeted Captain Whitsel (right).

For Defense - -

POWER AND MORE POWER

"Give us more and more electric power." Power for National Defense activities, for manufacturing and commerce, for home and farm. The insistent demand arises on every hand. This company's response is the greatest program of power plant construction in Georgia's history.

The first unit of Plant Arkwright, near Macon, with a capacity of 1,000,000 kilowatt hours a day, was completed June 4. The second unit of Plant Atkinson, near Atlanta, with a capacity of 1,500,000 kilowatt hours a day, has just gone into service. Two additional units, each with a capacity of 1,000,000 kilowatt hours a day, will be installed at Plant Arkwright within the next year-and-a-half.

The extraordinary demand for power is being met by engineering skill, enterprise and foresight.

Georgia Power Company

COTTON
SERVING THE
Textile Industries

Vol. 105 September, 1941 No. 9

As to Non-Defense Boondoggling

CONGRESS IS NOW working on a tax bill intended to produce somewhat over three billion dollars of additional revenue for defense purposes. Most commentators seem to feel that the pending bill is more or less a makeshift affair, and that perhaps by next year a more orderly program of taxation can be worked out. Three to four billion dollars of additional revenue is a rather pitiful amount compared to the defense appropriations already authorized, and yet Congress has had the utmost difficulty in framing a tax bill designed to raise this totally inadequate revenue. The balance of our enormous defense expenditure will be met, as usual, by borrowing.

Since it must necessarily be admitted that unlimited borrowing can not be continued indefinitely, it would seem to be high time for Congress to be considering possibilities of economy as well as new methods of taxation. For the past seven or eight years a great number of thoroughly socialistic schemes have been foisted on the country under the guise of emergency measures to cope with the depression. All of these measures of course contemplated a copious outlay of Federal funds to relieve the real, or imaginary, distress caused by the depression in different sections of the country and among different classes of its people. We were constantly reminded, however, that these were emergency measures which would be discontinued at some distant time, although there have been persistently some far-seeing New Dealers who have admitted that these so-called "emergency" socialistic schemes were going to be hard to discontinue and might perhaps be impossible to abandon.

The Federal Treasury will put out at least two or three times as much money in 1941 and 1942 for defense expenditures as was appropriated during any previous similar period for normal boondoggling activities instigated by political expedience. If there will ever be a time when these normal boondoggling activities can be discontinued, this is that time. Certainly, the Federal Government cannot hope to continue its present outpouring of funds without soon having to recapture those funds immediately from the taxpayers, and it therefore behooves the Government to reduce the outpouring to the absolute minimum.

ONE FERTILE FIELD for such reduction would be the complete elimination of all socialistic boondoggling. If the people artificially supported by these boondoggling schemes cannot manage to take care of themselves during a period of such tremendous business activity as we now have, they will never be able to take care of themselves.

The prices of farm products are rising and many of them have reached high points for the past 10 years. The representatives in Congress of the agricultural states have rather successfully resisted any attempt to put a ceiling on the prices of farm products, and it is a fairly safe bet that the bonuses and subsidies to agriculture will be continued.

There is a great deal of unnecessary W.P.A. work going on all over the country. Anyone who travels by automobile considerably will notice the W.P.A. signs dotted along the highways announcing this, that, or the other boondoggle at a time when these men ought to be employed on nearby defense projects if the Government is justified in finding employment for them at all. While common laborers are being paid $1.50 an hour or more to work as alleged carpenters, painters, electricians, etc., on defense projects, the W.P.A. is carrying on work in adjacent communities in direct competition with the needs of the Government for defense workers. It is rather difficult to see why, if the existence of this W.P.A. fund is justified at all, that W.P.A. workers should not be requisitioned for defense work exclusively. Any argument against the uses of W.P.A. workers and funds for such purposes almost has to be predicated on the assumption that a few million people have got to be kept on the dole forever and can not be available for really useful and necessary work.

These are two of the largest consumers of Federal bounty and are merely mentioned as examples. Unless the Government is willing to rid itself of these so-called emergency relief agencies during these present, booming times, it might as well admit that it has no intention of ever discontinuing these bounties, but that they are to become a fixed policy of Government in the United States.

There are signs even now that within the next year we may see an actual increase of W.P.A. and direct relief expenditures rather than a reduction. As the defense effort becomes intensified, there is going to be an increasing shortage of raw materials which will cause shutdowns involving hundreds of thousands of men. The present silk shortage is typical. Rubber and steel shortages are beginning to

affect plants manufacturing consumer goods. As more and more raw materials are required for defense there will be more and more manufacturing concerns shutting down or running short time, with resultant unemployment. It is inevitable that there is going to be a tremendous amount of pressure brought to bear by these unemployed people and their labor organizations to put them on relief. The easy way out for Congress will be to appropriate the money for putting these complainants on relief, but can the country afford to have millions of unemployed people on relief when labor is needed in defense industry?

IT IS TRUE that unemployment has very considerably decreased during the past year, but it has decreased very largely due to the fact that consumer purchasing has increased while we have been using up accumulated stocks of raw materials. As these accumulated stocks become depleted and as the demands of the defense program expand, this consumer goods business is bound to suffer and a great many people become unemployed again. Such of these people as do not find work in defense industries are certainly going to put up a howl for a dole, and will almost as certainly get it. Once a nation adopts a policy of giving handouts to everyone who asks for them, it is very hard for the government to say "No" when there are pleas for help. It would certainly seem logical during this emergency to discontinue all direct Federal relief whatever. The direct relief of indigent people is, was, and always will be, a local problem, and the Federal Government should never have undertaken direct relief and should long since have handed it back to the states and communities where it belongs. That this will be done, however, is most doubtful. When so many members of Congress have won their seats by extravagant promises of patronage and can only hold those seats by carrying out those promises, it is rather hopeless to expect economies until the country is so nearly broke that it has to economize through necessity.

However, if Congress and the Administration fail to seize this opportunity during the preparedness boom to get rid of the onerous burden that the Federal Government has been trying to carry, and on the other hand adopt a policy obligating the Federal Government to take care of everybody who does not happen to have a job or want a job, it is certain that nothing but complete national bankruptcy will ever impel Congress to economize in that direction, and then of course it will be too late.

IT IS OF the utmost importance that Congress shall as soon as possible work out a practical and realistic tax program, and eliminate from its appropriations every dollar which is not to be expended for absolutely necessary normal functions of government. If a practical and realistic tax program is worked out, this will have a very strong influence in keeping down the inflation which is now steadily creeping up on us. A sound tax program should be so planned that business concerns will know on what basis they are to be taxed, and can plan accordingly. With these patchwork tax laws, designed to snipe a little money here and a little somewhere else, business firms are constantly tempted to jack prices up just to be on the safe side in case some new trick taxes are levied against them without warning.

A good tax system should rest on a fairly permanent basis, with changes in the rate of assessment to produce more money. A good tax system should also be so designed as to discourage inflation and profiteering, while giving the honest, conservative business firm a decent chance to conduct its affairs in as normal a manner as the exigencies of this emergency will permit.

Ill-considered taxation which does not spread the burden widely enough, and which attempts to get too much of the money directly from business, is highly inflationary. This encourages price rises in industry and constant demands for higher wages for the employed.

The tax structure should be such that the money is collected as nearly as possible directly from the man who is going to pay it in the final analysis anyway—the consumer—and as we have previously pointed out, it should be collected in such a manner that there can be no doubt about its being a tax and not merely an increase in the price of goods.

If such a tax were imposed, then Congress could probably do a good deal of economizing by cutting out a lot of the really unnecessary expenditures. If the average working citizen of the United States paid plenty of taxes directly to the Government, and knew he paid them to the Government, he would have a much less lenient attitude toward boondoggling appropriations that can be dispensed with whenever the bulk of the people want them dispensed with.

As long as our tax system takes the money from the consumer in a devious and roundabout manner, so that he only sees his taxation as an increase in the cost of living, we are going to be plagued with a constant inflationary pressure from the millions of working people who see their wages buying less, and can't understand that this decrease in purchasing value is due directly to taxation and is one of the things that has to be borne with in a real national emergency.

Research Takes Time

WITHIN recent months, energies manifested in research and promotion in the name of cotton have multiplied on many fronts. A slow-moving industry finally seems awakened to the need of work along this line. With several parallel, and undoubtedly duplicating agencies working on the problem, it is to be hoped that there will be some steps taken toward co-ordination of all these efforts, to avoid unnecessary overlapping and the omission of some areas of study.

Furthermore, practical mill executives must not, with sharpened pencils, endeavor to calculate "returns on the investment" in research. In the first place, the funds and efforts recently made available are yet too small; but more important, research cannot be readily and immediately translated into figures. Ten years is not too long to wait before trying, if ever, to apply the "return" yardstick to these efforts.

Is Your Safety Program Tailor--Made?

Typical examples of satisfactory safety programs are given in this article. Yours must be tailor-made; here are some ideas.

By a Safety Engineer

EVERY NOW AND THEN a textile mill superintendent whom I am meeting for the first time will ask me, "What would be an effective safety program for my mill?"

The only possible answer to that is, "I don't know—yet."

A man does not ask a doctor he is visiting for the first time, "What is the matter with me, Doc?", and expect to get an intelligent answer without giving the doctor a chance to make a thorough examination and ask a lot of questions. Nor can the safety engineer give an intelligent answer to the superintendent's question without much the same procedure.

Safety Programs Must Meet Individual Mill Requirements

No two men are exactly alike—no two mills are precisely the same. The small mill does not need the elaborate safety plan essential to the large mill; the plan used in the East might not go over in the South; some mills thrive on contests, others cannot tolerate them; some mills can organize committees and successfully steer their conduct along the path of safety and safety alone, where the same attempt in other mills is about as safe as lighting the fuse on a keg of gunpowder.

In other words, no ironclad list of rules for a safety program can be set up and be guaranteed to work in every plant, any more than one medicine can be relied upon to cure the ailment in everybody. So much agreed upon, it must be further granted that for any one plant the original safety program lay-out must be sufficiently flexible to allow for changes—changes in personnel, changes in hours, changes in raw material and product, changes in plant size and scope. To attempt to adhere strictly to a program laid out a year ago regardless of the changes within is as disastrous as driving an automobile with the steering mechanism locked.

Safety Engineer's Approach

It is therefore impossible for me to say that any of the plans to be described is "better" than all the others. It is impossible for me to sit here at my desk and pick out the plan which would work best in your mill. Perhaps none of the plans would appeal to you as plant superintendent or safety committee chairman. Possibly the best plan for your mill would be a combination of certain parts of several of the suggested plans.

Before I would hazard a suggestion for your specific case, I would want to meet and get to know as well as possible in a reasonable length of time your entire supervisory staff. I would want to make a thorough unhurried survey of your plant with an eye to physical conditions, operations and equipment, and I would want to review accounts of the accidents you experienced during the past two or three years. Inasmuch as this whole program is directed toward, and for the benefit of, the mill operative, I would want to form some idea of the problem involved in that direction.

Then, and most important of all, I would want to be assured of the complete, sincere and active co-operation and approval of the top management. Some well-informed safety engineer once said, "To educate the janitor, you have to start with the president." Truer words were never spoken. Anyone having none or only part of this information is not in a position to recommend any program which is certain to produce satisfactory results.

Having all these data, then, I would be prepared to lay out a tentative program to be put into effect for a year or so to test its value. At the end of that time, or sooner if necessary, a review of the accident experience should indicate the presence or absence of flaws, and these should be minimized or removed, if present, by effecting the necessary changes in the plan.

The following plans were recommended and used, and were found to be successful in the plants where they were applied. The systems as outlined may not work in your mill, but maybe some of the points in each system will apply, and you can plan your own safety program from a combination of ideas given.

Courtesy Strickland Film Corp.

Motion pictures or slides are excellent in teaching safety.

Small Duck Mill

Mill A. This is a small duck mill, employing about 250 people.

The safety committee consists of the superintendent and the general overseer. There are no overseers in the plant, and each

department is supervised by a shift foreman. The small committee reviews together the accidents weekly, and if a case develops lost time, they call in the injured employee and discuss the accident with him personally. Each shift foreman is held responsible for the employees on his shift, the safe operation of the equipment, and the physical conditions in his department.

Weekly inspections are made by the committee, and recommendations are discussed verbally with the foreman on duty. Violations of safe practice are also called to his attention if observed. Orders for physical repair or replacement are sent by the committee to the master mechanic.

Safety posters supplied by the insurance carrier are placed on the bulletin boards, one located at each end of the mill, and these are changed monthly.

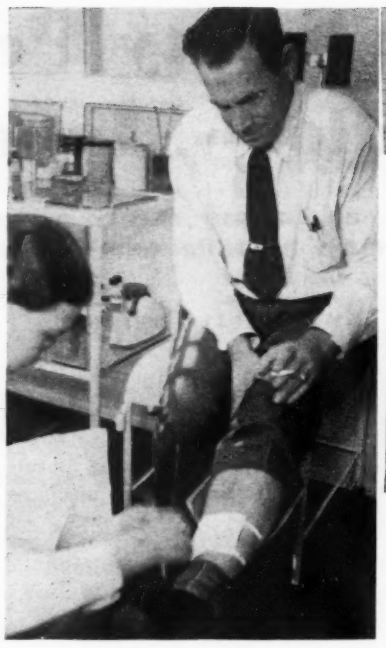
We cannot say that this simple plan is not a good one, since it has produced results and is evidently well suited to this particular management and their employees. Nevertheless, it might not work in your plant for any of several reasons. It may not reach enough people to satisfy you. More publicity might be necessary to put it across to your folks, such as quarterly mass meetings or inter-departmental no-accident contests. On the other hand, it may be just enough activity to satisfy your particular requirements.

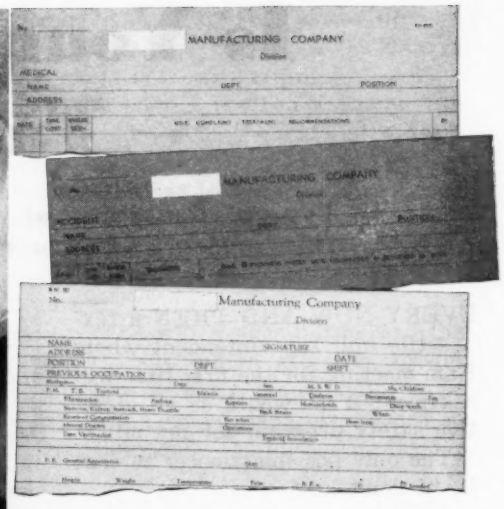
Cotton Mill, 700 Employees

Mill B. This is a cotton mill with about 700 employees.

There is but one safety committee with the master mechanic as chairman, and the overseers, secondhands and one operative in each department as members. Every three months the operative is replaced by another so that the maximum number of people can benefit by this valuable training. The agent and superintendent are actively interested, attend all monthly meetings, and supply any steering necessary.

Accidents are investigated by the overseer in whose department they occur, and his written report goes to the superintendent who sees to it that any practicable recommendation submitted to avoid repetition of the same type of accident is carried out.





Even minor injuries should be treated, and records should be kept of employees' injuries and amount of lost time. The above forms kept by one mill are (top to bottom), reports for medical treatment, accidents and general medical examination.

Each new employee is given a physical examination, and is also subjected to a very forceful talk by the overseer on safety and the hazards of his or her job before starting to work.

An inter-departmental contest runs from month to month, and progress charts are posted in each department. On June 1, 1941 the maintenance department of this mill, consisting of about 65 men, completed the fourth successive year without a single losttime accident, and at the time of this writing the record remains unbroken. This, in itself, is a mark for any shop crew to aim at.

The monthly meetings are supper affairs, and are used to discuss accidents and recommendations for improving conditions. To one of these meetings I brought a Director of First Aid and Life Saving of the American Red Cross. Together we put on a demonstration of artificial respiration as applied to cases of accidental electrocution in the mill. Later in the evening he presented to about a dozen men certificates they had just earned as Red Cross Life Savers in the water.

Other meetings are used to show lantern slides on safety in the plant, prepared by the writer in this and other textile mills, and films on safety after the working hours. Suggestions by operatives relative to improving production or increasing the safety of some operation are rewarded financially if put into practice.

First Aid is administered by the stock clerk for the very minor cases, and more serious ones are sent to the village clinic just across the road, where at least one trained nurse is always on duty, and where a doctor can be summoned within a very few minutes.

Safety posters are found on the bulletin boards on each department.

The personal interest shown by the management, plus the gratifying response of appreciative employees has produced for this mill in the past four years a remarkable record.

Yet, this program might not suit your plant. A mill of this size might possibly justify the setting up of an inspection committee to go through the mill periodically and report any accident or fire hazards that exist. On the other hand, this might be just the program you want.

Mill of 1,900 Employees

Mill C. This is a cotton and rayon mill employing about 1,900 people.

The management does not believe in committees, and all safety work is carried on by the five or six overseers and master mechanics, who are responsible to the superintendent. The overseers meet with the superintendent every morning, and while production and its problems

is the main topic, safety is discussed when warranted.

Accidents are submitted by the overseer who submits his written report to the superintendent, who in turn follows through and issues shop orders for anything requiring this attention.

There is an inter-departmental contest with charts in every room and one in the superintendent's office, this being put to good use during the overseers' meetings. The personal pride apparently taken by each employee in his department's record has a great deal to do with the satisfactory experience being enjoyed by this particular mill.

Plant inspections are made monthly by the safety engineer with the insurance carrier, in the company of the master mechanic. Recommendations resulting from these surveys clear through the superintendent's office and get prompt attention. They often receive compliance by the master mechanic before they are delivered in written form to the superintendent.

All First Aid treatment is administered by the stock clerk located on the first floor of a four story building.

Here, again, you might not accept the program in its entirety. You might possibly ask for a larger general safety committee in addition to departmental committees. You might also prefer allocating the First Aid treatment to each department to eliminate some of the lost motion incurred by the trip to the First Aid attendant.

Mill of 2,300 Employees

Mill D. This cotton and rayon mill has 2,300 names on its payroll, and has expanded considerably with regard to both size and accident prevention activity.

In each department there is one committee comprising the overseer and two second hands. They investigate all accidents in their respective departments and send written reports to the chairman of the entire committee who works out of the planning department and close to the superintendent.

To publicize the fact that safety is worthwhile and that someone is taking an interest in the personal welfare of the workers, each committeeman wears on his work clothes a green and white button inscribed with the words, "Safety Committeeman".

Each departmental committee makes a weekly inspection of some one other department and submits a written list of recommendations to the chairman who breaks it down into two groups, one going to the overseer whose department was inspected, and the other to the master mechanic for his attention.

Once each month all departmental committees meet with the chairman who presides, the superintendent and the assistant superintendent. Occasionally one of the executive officers of the concern will lend his presence to the meeting. The chairman keeps a card file of all accidents requiring medical attention, and he brings these to the meeting for discussion. He also brings the lists of recommendations and these are discussed pro and con, as well as other safety hazards.

Although these activities were organized by the safety engineer of the insurance carrier, they are self-sustaining, and if he can arrange to attend one or more of these meetings he is welcome to take part in the discussions and bring any additional material of interest.

An inter-departmental no-accident contest has been started, and charts of progress have been posted on the bulletin boards in the various rooms. This chart is duplicated in the form of a ten foot square steel board erected in concrete foundations at the main gate to the mill property, An electric light socket is placed over the name of each department, and whenever one or more employees are out of the mill because of accidental injury received while on the job, a red bulb burns in the department socket. When no one in an entire department is out because of a mill injury, a green bulb burns. The idea, of course, is to keep all the green lights burning, and the effect on employees coming to work and seeing for the first time one or more red lights put up since they quit the day before can be easily imagined.

There is a large, airy, well-lighted First Aid room on the first floor adjoining the planning department, and treatment is rendered by the chairman of the safety committee, who is a qualified First-Aider, having passed the standard course in First Aid given by the American Red Cross. The room contains a wash basin with running cold and hot water, the latter being furnished by an instantaneous electric water heater installed in the room for this purpose, a comfortable bed, chair, stool, and cabinet containing all the necessary equipment. Needless to say, the entire room is painted white and maintained in spotless condition. Since it is not good economy for an employee to walk from the far corner of the top floor of the mill clear down to the First Aid room for a single Band-Aid, when only a slight scratch constitutes the injury, a small metal cabinet with the rudimentary equipment for the treatment of the very minor injuries is kept in each department, locked for obvious reasons, with a key in the possession of one man on each shift.

Here, again, is a plan which is working out splendidly for the mill involved, but which might not, in its entirety, suit your plant. You may object to the wearing of safety insignia, even as some plants will not consider the wearing of uniforms no matter who buys them. You may not approve of centralized First Aid for the serious injuries. You might not get the proper response from a contest. But on the other hand, this plan might be just what you need.

Rayon Mill of 2,900 Employees

Mill E. This is the final plan for consideration, and the mill employs in the neighborhood of 2,900 people to produce rayon cloth.

First, there is a central or steering committee of four members, namely, the superintendent, general overseer of weaving, cloth room overseer, and master mechanic. One girl is selected from the cloth room help to take care of the necessary clerical work.

Then, in each department there is a committee consisting of the overseer and two secondhands. Every two weeks this committee makes an inspection of one other department and prepares a list of recommendations resulting from this survey. As soon as the list has been completed, the committee sits as a unit and cuts this list down to the three most important items submitted. The curtailed list is sent to

the central committee who reviews it and sends it back for attention to the overseer of the department inspected. Inasmuch as the master mechanic is a member of the central committee, he knows what items must be attended to by his crew, and he has the necessary work of that type done.

Ten days after the submission of the lists to the overseers, some one member of the central committee takes a copy of each of the three-item lists and makes a survey of each department to assure himself and the committee that the necessary action has been taken to remove or minimize the hazards found. If anything is found undone it is referred to the superintendent who takes whatever further steps he may deem in order.

Other duties of each departmental committee are the prompt investigation of accidents, sending written reports to the superintendent, and the education of the new employee or the employee transferred to another job, relative to the hazards involved.

The central committee meets every two weeks to review inspection reports, and all committees meet monthly for a supper gathering.

An inter-departmental contest goes on, and safety progress charts are posted in all departments, showing not only the lost-time record for each month of the current year, but also the total number of accidents developed in each department for the last calendar year, which gives an idea of the progress being made as the year moves along.

First Aid is completely decentralized, each department having its own completely equipped cabinet, and one person in each department on each shift being responsible for the rendering of the treatment. These First Aid attendants have been given instruction in treatment by the doctor who handles all the industrial cases for this mill.

Here, too, is a well rounded, smooth operating organization that means success for this plant, but might not apply to yours.

I still cannot say which is the "best" plan, for there is no one "best" plan for all mills. Each mill must be studied individually, and a plan to meet its particular requirements worked out. Perhaps one of the foregoing plans would suit you in its entirety, exactly as outlined. Or, perhaps you could use some of the features of one and some of another, to build something having no resemblance to the five plans outlined above. Then again, you may have some excellent ideas entirely foreign to anything written here, but best suited to your own mill notwithstanding. At any rate, all the foregoing plans are in practice today; they work, and they produce the results desired.

There is one thing of which you can be absolutely certain, and that is that the accidents won't take care of themselves. The plant manager who says he is "holding 'em down", and that is all he is doing, is kidding no one but himself.

Safety record board at entrance to mill. If department has lost-time accident the lights flash red. . . . . .

Essential Factors in Any Safety Program

Regardless of what program or type of program you eventually decide to install, you cannot be assured of even a fair measure of success unless you secure *all* of the following three very essential factors.

1. Complete backing and sincere interest of the top management. Nothing gives a safety committee more encouragement or a clearer realization of the value of safety work than the occasional attendance at these meetings of the top man, be he owner, president or agent. If he cares to address the group or take part in the discussions, so much the better.

2. Maximum publicity for your activities. This infers such features as inter-departmental no-accident contests, with charts posted in all departments, large outdoor contest boards, and buttons or badges for committee members. Some plants go so far as to hang a banner for one month in the department having the best record for the previous month, and on the other hand, place a large plywood white elephant in the department having the poorest record for the month just passed.

3. Maintenance of interest in committee meetings. Some mills have a predetermined list of topics to be discussed after the usual business has been completed. Others make every meeting a supper affair with an occasional outdoor fish-fry or barbecue. In the winter months, who can resist the temptation of fried chicken, hot biscuits and all the fixings, eaten in good company at the end of a hard day's work? Still others bring in an outside speaker to alternate, or every third or fourth meeting. The safety engineer with your insurance carrier is a good starting point. He can either provide material himself, or can secure someone qualified to talk on safety in the mill or safety after working hours. I cannot make that statement without reminding you of the fact that more people are killed each year at home and on the highway than at work, and many job vacancies occur because of injury sustained elsewhere.

In summary, it must be stated that all the foregoing plans as laid out for this discussion reveal only the skeleton or framework around which each is built. If any of these plans finds a place in your mill, it will be found that numerous ramifications develop along the way that will tend to give you a complete, well-rounded program entirely capable of producing the desired results.

Sonoco Purchases Carolina Fibre Company

In order to insure an adequate supply of paper board to meet the requirements of the textile industry, and as a permanent guarantee against future shortages, Sonoco Products Company, Hartsville, S. C., has purchased the Carolina Fibre Company. The Carolina was one of the first paper mills in the South and was the first mill to make paper from southern pine.

Renfrew Continuous Bleaching Unit Reduces Processing Time

RENFREW BLEACHERY, Travelers Rest, S. C., has installed the Du Pont continuous peroxide bleaching process, which so reduces the time of bleaching that it is possible for grey goods received at the plant in the morning to be shipped out finished on the afternoon of the same day. The problem of circulation of liquor in the goods is removed, because there is no circulation, and the process shows a return on the investment from the standpoint of saving in steam, time, labor and material.

The purpose of this article will be to describe the process, as installed and operated at Renfrew, and to discuss its principles and applications.

Continuous Bleach Flow Plan

First, a brief review of the processing itself. As in the conventional method of peroxide bleaching, the goods are unbaled, laid out and sewed, and if they are of the type that requires singeing, they are passed through this machine. Next they go in rope form through a quench box charged with dilute sulphuric acid, which is kept between 1½ to 2 degrees Twaddle at Renfrew. This serves the purpose of desizing.

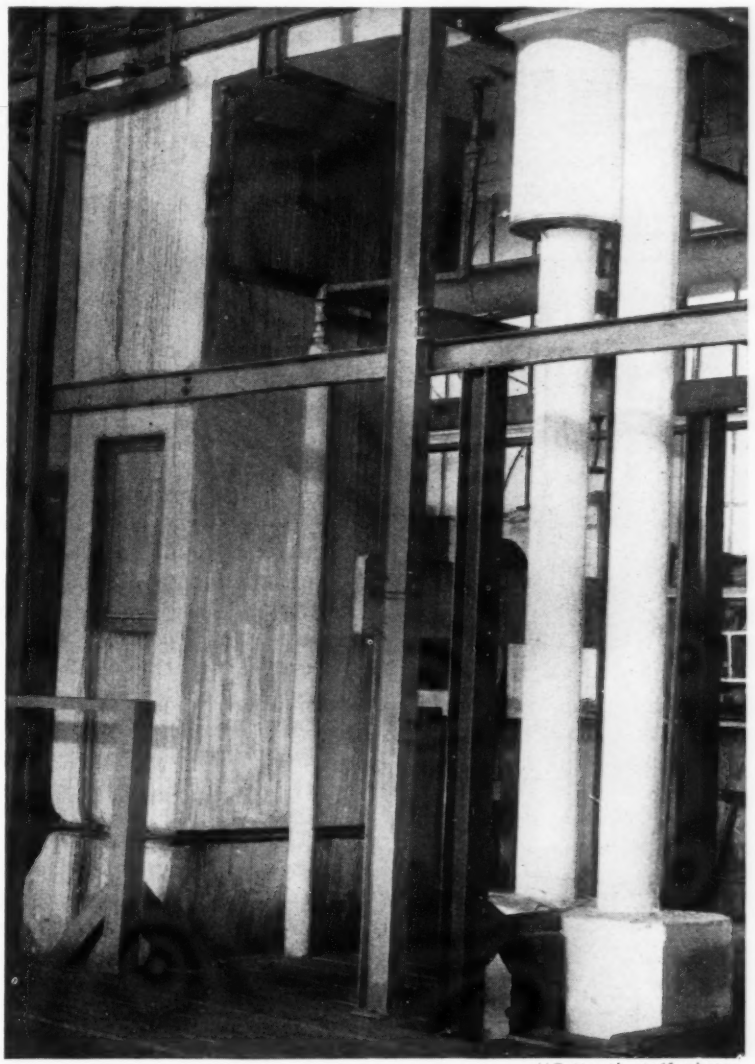
After the quench, the charged goods are run to a Gantt piler where they are stored for 45 minutes until the chemical reaction from the preceding sour has taken place. Coming out of the Gantt piler the goods pass through a tight strand washer carrying from 12 to 16 ends and are transferred, still in the rope form, to the grey bin. Renfrew sends the rope through a squeeze following the Gantt piler, but this is not absolutely necessary.

When ready for further processing, the cloth is pulled from the grey storage bin in rope form, spread to open width and sent through a caustic saturator, staying there just a few seconds because the goods are given 6 dips at 100 yards per minute.

Heat Speeds Up the Process

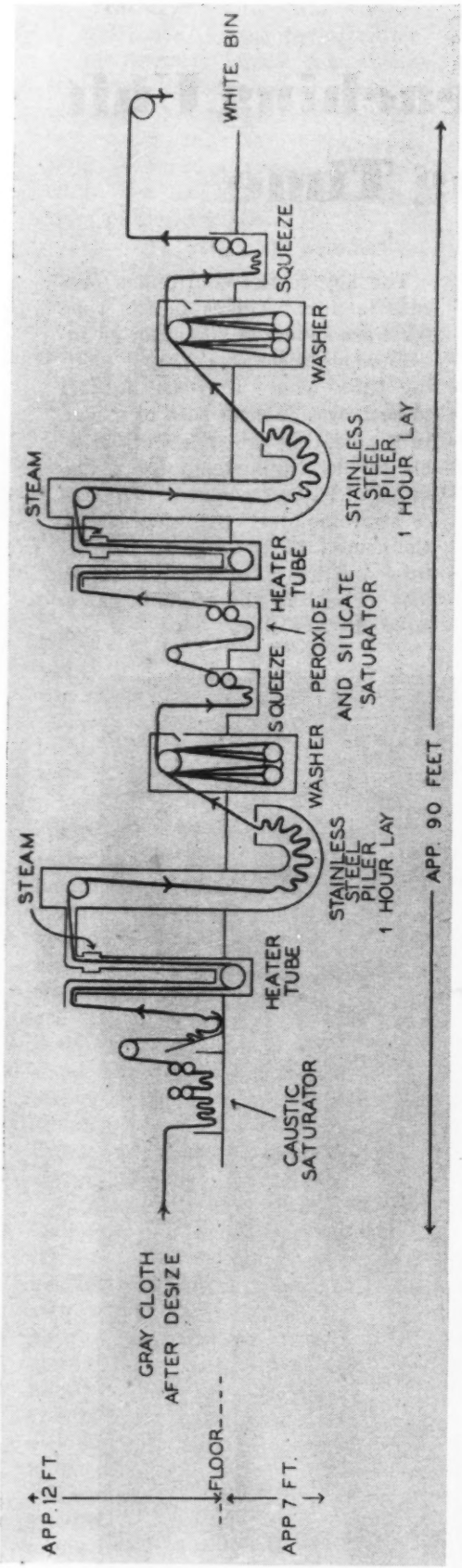
It will be noticed that up to the grey bin the process has been the same as in conventional methods of bleaching. From the grey bin on throughout the process the goods are working at 100 yards per minute and the process itself is vastly different from conventional bleaching methods.

The key to the continuous process is next. Goods in the rope form are squeezed and enter an insulated stainless steel U-type heating tube, where they are subject to heat by a counter flow of steam. In the heating tube the cloth travels through the steam for a distance of 23 feet where it is heated to approximately 210 degrees F. Connected to the U-type heating tube and insulated to prevent the loss of heat by the goods is an insulated stainless steel J-box,



"Cotton" staff photos.

Close-up view of heating tube and J-box, the two prime factors in the continuous peroxide bleaching process as described in the accompanying article. Heating tube at right; J-box at left. This photo does not show top of tube and J-box; see picture on page 67



Above, the flow plan of the continuous peroxide bleaching unit at Renfrew. In straight line order the process requires about 90 feet. The key to the highly speeded process is heat and storage in J-box.

where the heated goods pass and remain for one hour. This J-box is of such size that there is a continual entering and passing of the goods, but any given yard of material remains there for the full hour. Of course, in first starting up a run of goods to be bleached, the J-box must be filled with its "permanent inventory" of cloth before any is drawn out.

Next the cloth goes into the slack washer taking 6 ends and is given a warm water wash, and again goes into a slack box.

The following process is the peroxide saturation. Goods simply pass through this box, which contains silicate and hydrogen peroxide, and are given a 100 per cent squeeze.

There is a second set of a U-tube and J-box, as previously described, where the goods are again heated by a counter flow of steam in the U-tube (but the temperature of the cloth is controlled not to exceed 205 degrees F.) and retained in the adjacent and connected insulated J-box for one hour. Here the actual peroxide bleach takes place.

The bleaching operation completed, the goods are taken through a 12 to 16-strand tight washer and given a cold wash, and stored in the white bin.

It might be brought out here that if colored goods are processed instead of white goods, it is customary to substitute hydrogen peroxide sodium silicate for caustic in the first saturator.

The heating tubes are automatically controlled for the proper degree of temperature.

It has been mentioned that the goods are traveling through the process at the rate of 100 yards per minute, though this could be increased materially according to the design of equipment.

Comparative Figures

The time required for the continuous process is approximately two hours, that is, any given yard of fabric will be in process for that length of time. The output of the installation at Renfrew is 6,000 yards per hour. Based on goods weighing 4 yards per pound, this is a production of 1,500 pounds per hour. Allowing a reasonable percentage of time for shut-downs, this would mean that the line would turn out approximately 33,000 pounds of this type of material per day. For the normal peroxide kier process, a cycle of approximately 18-24 hours would be required. Thus the one line at Renfrew will exceed the production of four 4-ton kiers, as under average plant conditions it is only possible to process one line per day per kier.

To take a given kier load of cloth as the unit for comparison, the present continuous line of Renfrew would turn out this quantity of material in five hours and 20 minutes, whereas, as mentioned previously, the goods would be in process in a kier for about 18-24 hours.

It should be pointed out, however, that the rate of production at the Renfrew plant was decided upon arbitrarily and does not represent the maximum output of the process. In installing this apparatus at Renfrew, a speed of 100 yards per minute was simply agreed upon as being suitable. There is a program under way to increase the speed of the process in future installations to about 160 yards per minute. The speed is determined and limited by the storage capacity of the bleaching units and their size can be varied to suit requirements.

Quality of Fabric

Several important facts about the continuous process should be borne in mind. The finished goods are of excellent quality and compare favorably with goods finished by conventional methods; they have excellent affinity for dyeing; but it is just as important with the new method as with conventional methods to have the waxes, gums, size and other foreign matter removed by preliminary treatment, though this is done much faster because of the caustic and heat treatment.

The chemical and physical condition of cotton fabrics bleached by the continuous process are equal in quality to the best commercial methods now available. The fluidities of fabrics so processed will have the usual low values for cotton goods processed by normal peroxide bleaching methods and should fall within the

range 3.0—5.0. Breaking strengths are also good and in no case have goods bleached by this method failed to meet commercial specifications for any given fabric.

Desizing or souring can be handled as on any other process. There is little difference in the comparative removal of non-cellulose materials by this method and others.

As regards the problem of circulation which is so often troublesome to bleachers, this is entirely removed because there is no need for circulation of liquors. The goods are not stored in liquor in kiers, but receive their saturation and immediately get the heat treatment and go into the J-box. Obviously, the question of using automatic or hand-piling is also removed.

As in conventional methods, the natural color of the fabric and the degree of whiteness desired, govern the amount of bleaching agent to be used. Renfrew has a stock solution and a flow pipe to the saturator which covers the usual intermittent check on concentration of bleaching solution.

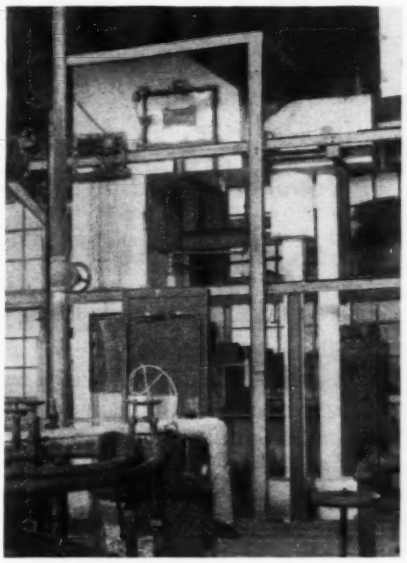
Range of Goods Handled

In general, any fabric that can be handled in the rope form in the normal bleach process can be satisfactorily handled in the continuous process. This will include virtually all types of fabrics which are, for example, lighter than three yards per pound. It is true that most of the work done at Renfrew is limited to the lines on which they specialize, but in experimental work at both Renfrew and other plants, the variety of fabrics handled has been much broader. Included in the experimental work are printcloths, broadcloths, colored, striped, or dyed yarn fabrics, shirtings, tickings, bird's eye, marquisette, terry toweling, huck toweling, muslin and percale sheeting.

Renfrew has processed satisfactorily goods of 4.00-yard weight. The installation as now designed is not used for heavy weight fabric which must be handled in the open width because the goods must pass through the heating tube and remain in the J-box in the rope form. Obviously, the same principle could be adapted in a design for handling goods in open width specifically. Although the equipment described handles goods at 100 yards per minute, higher speeds are available when this becomes necessary in other new installations.

Floor Space Required

All of the various items involved in the continuous process, if placed in a straight line and allowing sufficient operating space, would occupy a space 90 feet long by 12 feet wide, or 1,080 square feet. The production volume of this line would depend upon the size of the bleaching units and the speed at which the washers, etc., were operated. As mentioned previously, this is flexible and has to be fixed to suit the requirements of the individual mill or the fabric under consideration.



This staff photo takes in all of the heating tube and J-box above floor level. See flow plan on opposite page for approximate distance equipment extends below floor level. There are two of these units in the continuous process. . . .

While no one is in a position to say definitely what the maximum speed of the continuous process might be, it is the opinion of technicians that speeds of 200 yards per minute are entirely possible. This would give a daily production of some 65,000-70,000 pounds of 4-yard goods for a single line, which would be equivalent to the production of seven 5-ton kiers, and these kiers alone would occupy a floor space of approximately 1,000 square feet, and not included in this figure is the space occupied by the washers and incidental equipment.

In addition to the foregoing, if a mill so arranged that it might be possible, there is no reason why a continuous bleaching range cannot be connected directly to the drying range, thus eliminating the necessity of storing cloth in white bins. In other words, the continuous bleaching process is subject to modifications in design to suit a large variety of needs.

Facts and Figures

The steam required for the operation of the process (by actual plant test) amounts to 980 pounds of steam for every 1,000 pounds of goods. The requirements for an average kier bleaching process would be approximately 2,500 pounds of steam for 1,000 pounds of cloth.

Substantial savings are made by the continuous process from the combined figures of labor and chemical cost on plain goods, and for colored goods the savings are somewhat higher. One bleachery, figuring on the installation of continuous bleaching, calculated that through savings as compared with its present method, two bleaching units pay for themselves in about 10 months.

How to Make A Good Impression

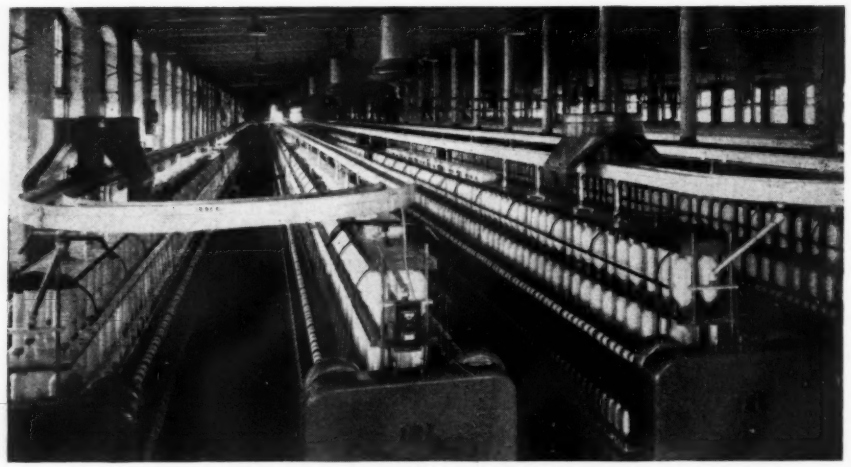
When a stranger comes into your home, you put yourself out to make him feel at ease and "right at home."

To make a new man feel at home on the job, apply those same little thoughtful, helpful courtesies to him that you so naturally extend to a stranger coming into your home.

Here are several suggestions on making a good impression on a new man:

1. Shake hands with him and make him feel he is sincerely welcome.
2. Smile! (Even though it may be one of those "tough" days.)
3. Tell him at the very beginning that you are going to be his friend and helper.
4. Introduce him to the men he is going to work with so that he doesn't feel "like a scared pup in a new pack."
5. Impress on him that you want him to come to you with any question at any time.
6. Above all, don't "throw him overboard to sink or swim."

If you will just be human, friendly and helpful, you are pretty sure to make a good impression on the new man.—*"Management Information", Elliott Service Co., Inc.*



View of a well kept spinning room.

Keeping the Mill Clean

(*Article I*)

Better quality to finished product; cleanliness builds good morale, prevents fire, reduces accidents. Good housekeeping.

By Erwin Hard

THE MANAGEMENT and the supervisory force of any textile mill should keep in mind the importance of a clean plant for the extra quality that cleanliness will add to the finished product. There was never a statement more true than this: "You cannot produce a first quality product in a dirty, ill arranged, poorly kept mill". As the quality of the finished goods is increased so will the profit of the mill increase.

If the mill is kept clean you will usually find healthy, happy, contented people. If we did not want to keep our plant clean for the sake of our pride in it, we should consider the health of our friends and ourselves. A sickly, ill-feeling worker cannot do his or her work best. When the environment of a worker is kept clean and orderly it helps to build a clean spirit and a neat employee. All these efforts toward plant cleanliness lead to better health for everyone. Sickness and disease cost the worker wages, and cost the management in many cases in the absence of the best workers from their jobs.

Cleanliness Builds Good Morale

A clean plant helps build the morale of the workers. If an employee starts to work in a clean, orderly plant there will be a tendency on his or her part to follow the example of the other workers. The results are usually noticed throughout the plant and even in the home, and social life in the community. On the contrary if a worker starts to work in a dirty, poorly kept plant, he or she will possibly become careless like the others. This also breeds a lack of thoughtfulness and subsequently a general breakdown in the community life. It is an asset to everyone and the company's name for the morale, pride and well-being of the employees to be so high that it will attract the attention of workers in other plants and create a feeling of "I would like to work in that plant".

Fire and Safety

When a company installs a systematic cleaning schedule the chances of having a fire in the plant are considerably reduced. The safety of the employees is improved because the trash, waste. etc., is kept cleaned up or in certain places provided for this purpose. If the oily, greasy waste and trash that is to be burned or hauled away is collected regularly and disposed of, it will lessen the chance of fire in the plant from spontaneous combustion —the cause of so many fires in textile plants.

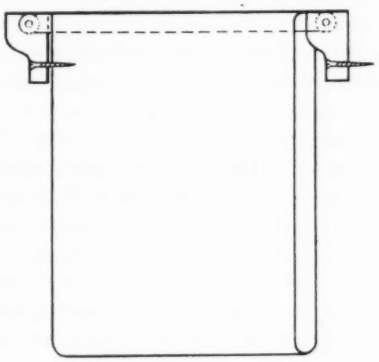
• There is a multitude of reasons why a textile plant should be kept clean; from the standpoint of health of operatives, quality of work, safety, morale of employees, etc., but we can't think of a single reason for a mill to remain in a dirty or disorderly condition. It is easy for us to become so accustomed to poor housekeeping that we don't notice it. But you can bet your last penny that anyone else walking into your plant sees it immediately. Good housekeeping and cleanliness are attributes well worth attaining. Some of the factors in keeping a mill clean and orderly are brought out in this article, the first in a series on cleaning in the mill, and you might do well to check back to see what you are doing to keep your own plant in order . . . . . .

A regular schedule of cleaning electric light bulbs, lamp tubes and shades and reflectors will aid in "better seeing".

Cleaning the humidifiers regularly will result in a more uniform humidity, because if the strainers become clogged with lint it will cause the heads to operate poorly and cause a lot of unnecessary overflowing. This will also cause damage to the work and loss of time in cleaning up where the head has run over. A humidifier motor is also very often a neglected piece of equipment. This should be wiped off clean and properly oiled on regular schedule if we expect to get the maximum efficiency from the motor.

Important to Keep Machinery Clean

There are many reasons why the machines of a textile plant should be kept clean: 1. For the better quality of work the machine will produce. 2. With oil holes cleaned out regularly the lubrication of the machine is simple and the oil can go to the right spot, saving the oil, machine and power, etc. 3. The life of the machinery is increased.



Home-made towel rack.

4. Pride of the operator is boosted. 5. The chance of a machine catching fire is minimized, and the damage is small if a clean machine does catch fire. 6. It helps to keep down "choke-ups", "lap-ups" and the many other troubles of this nature which decrease production, damage machines, and keep the fixer busy on break-downs which could have been prevented.

Good Housekeeping

All bins, waste containers, etc., should be arranged in an orderly manner so that they will serve their purpose and will not be turned into trash piles. The bobbin bins and places for storing roving should have covers or doors so that they can be kept closed when empty or full to prevent the accumulation of lint, waste and trash. It is the opinion of the writer that it is poor policy to store laps, roving, or any manufactured materials on the floor. The material is likely to be spoiled from something dirty on the floor, and then too often workers will sit or lounge on the materials and cause spoilage. Often roving packed up in alleys will be hit by passing trucks and the whole stack will tumble down with much of it becoming damaged. There should be covered places provided for storing roving, full cones, warp, filling, etc., so that it will not be damaged before needed in a subsequent process.

All hangers and overhead motors should be equipped with suitable oil drip pans. These may be of any shape or size which is best adapted to the need, so as to prevent oil dripping on the floor, goods, or machines.

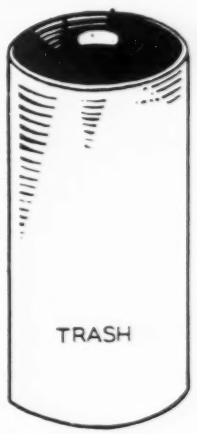
Employee Training Important

It is important that every employee be trained to help keep the plant clean, and that the employees have a real spirit of co-operation. If the employees are careless about cleanliness but the plant must be kept clean anyway it involves considerable more expense to do so. Employees will become interested if the facts are shown that waste and lint on their machines causes stoppage, and this will, if on piece rate, reduce their wages.

Locate the disposal places for refuse convenient to the workers and this will add to their willingness to co-operate in the cleanliness program. All toilets and wash rooms should be kept clean, disinfected and plenty of towels provided. A place to dispose of the used towels prevents their being thrown on the floor. Some plants are able to use their own materials for towels, and by sewing them into an endless towel a fresh portion of the towel may be pulled out when needed. Sometimes these are simply pulled around a revolving wooden roller, but they should be laundered often and replaced.

When tobacco is used by the workers (as is the case in most mills) it necessitates the placing of some type of cuspidors throughout the mill. These may be arranged on posts, walls, machines or work benches; the main idea is to place them where the operators will not have to go to any extra effort to make use of them, and the results will be much more satisfactory. (The writer will discuss this interesting phase of the subject in detail in a later article).

Employees should be encouraged to wear clean working clothes if uniforms are not required. There are few processes where the work being done does not come in contact with the workers' clothing.



Old roving can cut off and made into waste receiver.

A great deal of the bad work in yarn and cloth can be traced back to a dirty ceiling. Lint accumulates there and drops off into the work causing "bunches" and ugly places. Compressed air can be used in many places for cleaning the ceiling of the mill, hangers, etc. Where this is not suitable, brooms or brushes, attached to extended poles for long handles can be used effectively.

Windows should be washed periodically. In between the times for washing the windows they should be kept brushed out and lint not allowed to accumulate there and stick to the panes and mullions.

There are several methods, materials, and machines that are very helpful in keeping a mill clean. Cleaning by vacuum, compressed air, mill-made mops, brushes, floor sweeping compounds, scrubbing machines, special brooms, etc. These, and many more, will be discussed in detail in the articles to follow.

Processing Spun Rayon Blends

Education of operatives is important. Compressed air to blow acetate fibers apart. Additional finisher picker employed.

By B. L. End

FROM TIME TO time there have appeared in COTTON the manufacturing specifications for processing rayon staple fiber and blends of this synthetic fiber with other textile fibers, such as wool and cotton. It is of course important that a mill develop the proper machine settings before turning out a quality spun rayon product, but two of the most important factors in processing rayon staple fiber are to educate the operatives in this comparatively new work, and to get an excellent blend of the mixed fibers before the stock reaches the spinning frame.

One southern mill has an entirely separate opening room where nothing but rayon staple fiber and its blends are handled. This serves the double purpose of getting the stock off to a good start without becoming mixed with the cotton, which is opened in another room, and has a psychological effect on the operatives by impressing them that especial care must be taken to see that various blends of rayon do not become mixed in passing through the processing.

Operatives are constantly cautioned against mixing rayon stock, and are taught that above all the rayon must not be handled in such a manner that it will become damaged, dirty or oil-stained. Operatives who have been working on cotton must be impressed that rayon stock can be injured much more easily than cotton, and that any contact with foreign matter or oil may ruin quite a sizeable batch of goods.

"Sandwich" Has Definite Layers of Stock

The sandwich method of blending is used in this plant, with each type of rayon or other fiber constituting a definite layer of its own. In this way the proper percentage of fiber for each blend is put into the hopper when the operative scoops up an armful from top to bottom. Also, the designated percentage of fiber is actually weighed up on scales to make the sandwich, and no guesswork is used by simply putting down what is estimated to be the amount needed.

Acetate Fibers Blown Apart

Since blending of the mix is important, this plant takes no chances that the tufts of acetate will stick together and cause an acetate lump in the picker lap, and to prevent such occurring, all acetate stock is trucked to the door of an enclosed room or compartment, where the operative removes it from the truck by the handful and permits the tufts to be blown apart by compressed air and into the enclosed room. Then, if acetate is to be included in a mix, the stock that has been well separated by compressed air is used in the sandwich mix. This particular room is used for opening acetate only as there would be danger of stray acetate fibers finding their way into a blend of non-acetate stock if other fibers were handled in the same room.

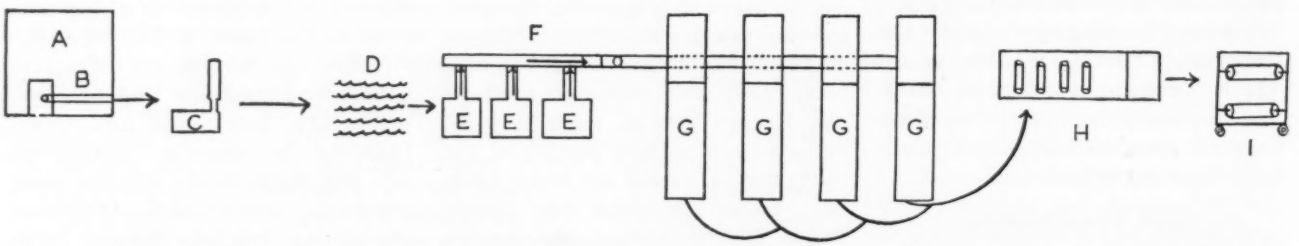
Still carrying out the principle of blending, each batch of sandwiched stock is fed into three hoppers, each of which blends the stock still further before it is fed onto a belt conveyor leading to the picker hoppers.

It can be seen from the foregoing that the rayon mix has had a good start toward blending before it gets to the picker hopper, where, of course, it receives additional tumbling and mixing.

The picker room proper is equipped with single-process pickers, each of which has a Buckley, blade and Kirschner beater from back to front. This mill does not consider it good practice to use the blade beater on pickers when rayon is run, but the blade beater gives an excellent distribution of tint, so it is used.

Additional Finisher Picker Used

After the single-process pickers have made the laps, each lap con-



FLOW chart of blending operation as described in the accompanying article. "A" is enclosed room or compartment for receiving acetate rayon staple fiber that has been opened by holding in front of compressed air pipe nozzle "B". All stock weighed on scales "C" and then goes into sandwich mix "D". Is then fed into three hoppers "E" which feed onto conveyor "F", which in turn feeds into picker trunk distributing to pickers "G". Four laps from single-process pickers "G" are placed on finisher picker "H". Finished picker laps are wrapped in paper and stored on rack-trucks "I".

taining rayon or blends of mixed fibers is put through a conventional finisher picker in order to further blend the stock. This is done in the usual manner by placing four laps on the apron of the finisher picker. It might be said that this also insures a very even lap.

All laps containing rayon are then wrapped in paper to protect them from injury and to keep them from sagging on the bottom. This paper is left on until the lap is actually started under the feed roll of the card.

Cards running acetate blends are not separated from other cards by a partition, but all windows in the card room are kept tightly closed so that no draft can drift the fibers of acetate from an acetate card over to a card running some blend in which an acetate fiber would stand out after the cloth had been finished. Relative humidity in the card room is kept at 60 per cent for it has been found that much of a variation in either direction will cause loading-up of the lickers-in.

It might be interesting to note that on the slubbers in this plant the top rolls are leather over a koroseal base. It was found necessary to have the flyers and other parts that the rayon comes in contact with plated to prevent the fibers hanging and then turning loose to form a slub. This was also done to the stop motions on the drawing frames.

Blending is still carried out in spinning inasmuch as the stock is run double in the creel, and a provision has been made to insure that no singling will continue to run.

In order to remove tension on the rayon yarn at the slashers, an individual type creel is used, with all weights being the same on the section beam to insure the same degree of tension. The layer of warp from the top section beams pass through one size box and the warp from the bottom section beams go through another, meeting at the cylinder.

Apron Protects Cloth on Loom

In the weave room the operatives are taught the dangers of getting the stock dirty and oily, and in order to protect the woven cloth from possible injury, an apron is attached to the breast beam and covers the roll of cloth on the cloth roll. Care is also exercised in doffing the looms to see that the cloth does not come in contact with oily portions of the loom or oil on the floor.

When the Management Spits

THE OTHER NIGHT the writer was a guest of the safety committee of one of the large South Carolina cotton mills on the occasion of their regular monthly meeting. When the business of the evening was concluded the chairman asked for any further comments or suggestions.

The assistant superintendent stood up, threaded his way to the front of the room, and pushed back a few chairs.

He faced the men, stood silent a few seconds, and then ejected a juicy, liquid stream of tobacco juice, ringing the bell right smack under the seat of the chairman.

Astonishment was written on every face in the room.

"Fellows," he then asked, "How does that look to you? . . . To me it looks like particular hell!"

Silence greeted his words. Then he continued.

"Yet, how many of you confirmed tobacco chewers can recall doing this very same thing within the past week, despite the fact that the nearest cuspidor was within ten feet of you?"

About half the men present slowly, sheepishly raised unwilling but honest hands.

"Well, then," he continued, "If we of the management spit all over the floor, how in this world can we expect our employees to stop this nasty, filthy, dangerous habit . . . a habit that spoils the appearance of our mill, spreads disease, and causes slips and falls?"

Further words were unnecessary. The point was most forcefully put across, and a perfect lesson was given in setting the example.

If the management spits on the floor, the employee spits on the floor. If the management smokes in the mill, the employee smokes where he pleases. If the management disregards safety rules, why should the mill operative trouble to do otherwise?

How To Cut Waste

Here are some suggestions which came out of a conference of supervisors discussing ways to reduce waste:

1. Establish *competition* between various men and groups.
2. Post records showing *trends* in waste from week to week.
3. Post *costs* of waste.
4. Run down every waste to its *original cause or source.*
5. Visualize waste by giving *examples* and setting up *exhibits.*
6. Try to show each man what *his own waste costs.*
7. Set a *good example* by controlling elements of waste on your own job.
8. Show how waste cuts down the volume of *finished products.*
9. Promote workers who *waste least.*
10. Keep *everlastingly* at waste elimination.

There is no better way for a supervisor to win recognition as a good manager than by establishing a record for rigid waste control. Don't wait until wasteful work habits develop. "Nip them in the bud." —*"Management Information", Elliott Service Co., Inc.*

"Dr. Quiz" Program Goes Over Big at Meeting of Key Men

AT ONE LARGE GROUP of mills in South Carolina there has been organized for sometime a club whose members consist of the overseers and superintendents of the plants. The men hold regular meetings twice a month, one meeting being purely a social affair at which supper is served and the other meeting is for the purpose of discussing mill problems. Meetings last about an hour and a half and are held in the club room of the main office building.

It is the custom for every member of the club to take part in the business meetings at one time or another. During the past several years programs have been on such subjects as carding, spinning, spooling, warping, slashing, weaving and cloth room, with discussion going on very much in the same manner as at the divisional meetings of the Southern Textile Association. At other times special programs have been arranged devoted to belting problems, shop work, village and outside, supplies, waste, labor laws and labor relations, and once the club had the fire insurance inspector put on a program. The liability insurance inspector also gave a talk and showed slides on safety methods.

In fact, the programs were so varied and well planned that recently the club officers had to search around for something new. They hit upon the idea of having a "Doctor Quiz" meeting, and the program that was developed along this line proved to be one of the most interesting and instructive ever held. Teams of five men each were chosen with the rest of the club as the audience, but after each question discussion was continued until all the members were satisfied with the answers.

Some of the questions along with the answers are given as follows. It will be noted that though one answer is given, in some instances the question could be answered somewhat differently and yet be correct.

1. *What is the Walsh-Healey Act?*

Rules and regulations you have to abide by if you have any government contracts.

2. *What is the minimum age at which a person can work under the Walsh-Healey Act?*

Boys—16 years; Girls—18 years.

3. *"A wants out for two hours so he gets "B", who works on the next shift, to work for him two hours and "A" in turn will work two hours on the second shift for "B". Is this O. K.?*

Yes. Provided both "A" and "B" work their 8-hour period within a 12-hour period.

4. *"A" is a spinner and has a set of sides. She stayed out four weeks before she knew of her illness, then she entered the hospital for two months. When she returns to work should she be permitted to return to same job?*

If her work was entirely satisfactory she should be given same set of sides or a like set if possible. However, overseer and superintendent would have to use their judgment as all cases would not be exactly alike.

5. *If a loom fixer quits and his wife is a spinner and his boy is a loom cleaner—the fixer has a house—what would you do about getting his house for another employee?*

If after a reasonable time they do not move, tell other members of the family that they will have to give up their jobs until they have moved, then they could come back to work. If other members of the family were not doing satisfactory work and you wanted them to leave, you would have to have some other reason for letting them go rather than discharging because the head of the family lost his job.

6. *If a person has conducted himself in a questionable moral way and you find it out, what would you do? If you let him go, how would you word the labor report?*

Let the employee go, but do not state for moral reasons. (You might not be able to prove it and this could cause a law suit.) Have some other reason for letting him go.

7. *If you have an employee who refuses to take orders, what would you do about this type person?*

1st. Be sure the employee understands all orders clearly. 2nd. If he still does not understand an order, explain why you have given that order. 3rd. If he still does not or won't carry out the order, send him out, telling him to think it over and come back to see you.

8. *Do all state labor laws become void when a federal law is passed covering the same subject?*

No. Whichever law is the strictest will still be the one to abide by.

9. *If mill power goes off and after waiting ten minutes without it coming on, and without your finding out anything as to when it will come on, what should you do?*

Tell all operatives we are stopping for 30 minutes and to come back then. You can then mark them out for this half hour. If you just wait without telling them you are stopping for 30 minutes you have to pay them, that is, all who are not paid by the piece and

you would have to pay them if they failed to make the minimum due to the time stopped cutting down their earnings.

10. *If an employee stops you and asks you some unusual favor just out of a clear sky, what wou'd you tell him?*

In some diplomatic way put him off until you can decide what answer to give him. Always give him an answer rather than forget the matter.

11. *Who pays unemployment compensation to an employee who has been working for us for the past three years but who quit, worked one day for another mill and quit again?*

The mill at which he worked the last day pays all compensation.

12. *Should a straight rate of pay or time and half be paid for Sunday work?*

Regular rate of pay.

13. *If two or more employees get into a fight on the job, how would you handle?*

Send them all out for the rest of their shift and tell them to come back to see you.

14. *If an employee gets mad and curses his overseer, what is the best procedure?*

Try not to get mad yourself. Send him out for the rest of the shift and discuss with your superintendent. "Never fire a man when you feel like it."

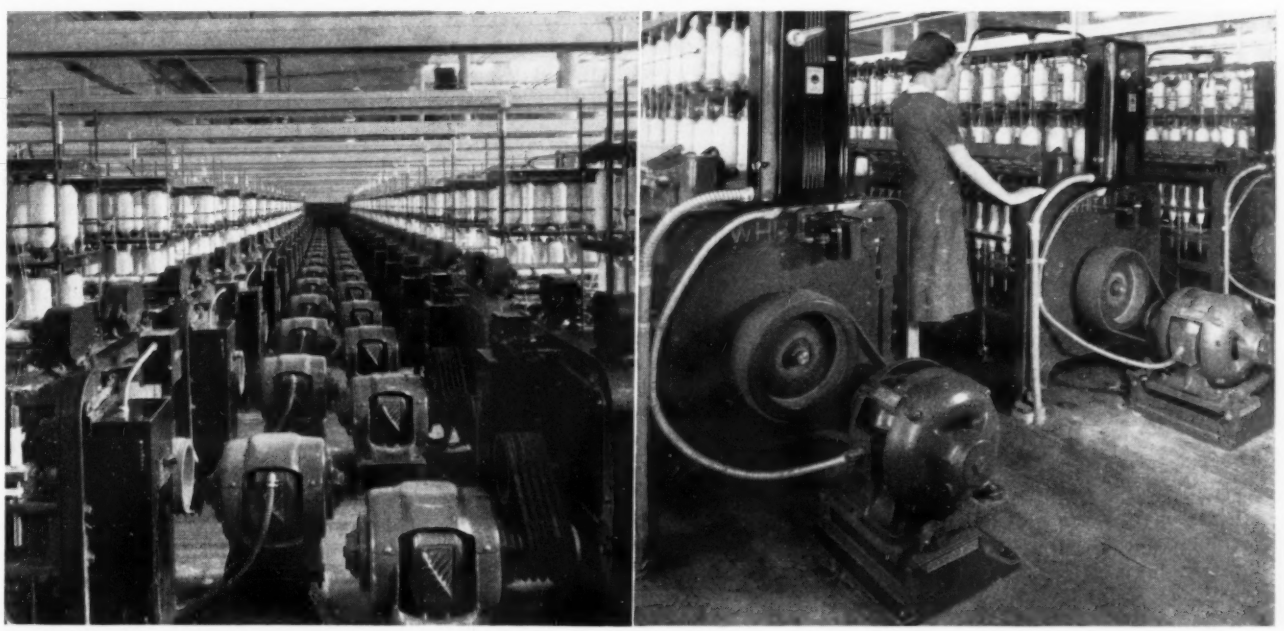
15. *"A" is a section man. "B" is a warper hand. Can "B" work in "A's" place without being paid "A's" wages?*

Yes. If in the discretion of the overseer and superintendent he should not be paid the full section man's rate. However, the employee should be told *when he starts work* on the section what he is going to be paid.

16. *Can an overseer spend all the time he cares to on any work in his room?*

He is not considered an overseer if he spends twenty per cent of the time his employees regularly work doing the same type work they do.

Pivoted Motor Bases on V-Belt and Flat-Belt Drives



Courtesy, Rockwood Mfg. Company

Pivoted motor bases used in connection with v-belt drives on spinning frames at the Columbus Mfg. Company, Columbus, Ga. Henderson (N. C.) Cotton Mills use the floor type of pivoted motor special base with flat belts for spinning frames.

APPLICATION of pivoted motor bases to textile equipment with v-belt as well as flat belt drives is an inteesting development. Two installations, one with v-belt drive and the other with flat belt, are shown in the above illustrations. It is pointed out that with this form of base, whether on v-belt or flat belt drive, when the belts are stretched under load and elongated, the belt tension is automatically maintained regardless of the stretch. This automatic belt tightening eliminates the irregularities, etc., occasioned by fixed bases, and the work involved in changing belt tension with manually operated motor slide rails.

American Viscose Installs Worsted Machinery

A standard Bradford drawing and ring spinning layout for experimental production of worsted yarns has been installed by American Viscose Corporation in its textile unit, Marcus Hook, Pa. Said to be the initial step toward a complete woolen and worsted system, this installation reflects the company's interest in developing further applications for rayon staple fiber in worsted-type fabrics.

The newly installed equipment includes a set of gill boxes, draw frames, and ring spinning frames. All equipment is of standard design except for extra features incorporated for adaptability in controlling speeds, tensions, etc., over a wide range of conditions.

The textile unit was established in 1940 as a major part of the company's research and development program. It is a separate and self-contained research plant containing a wide variety of types of equipment used in every phase of textile production.

Priority Ratings as They Affect Textile Manufacturing Plants

By Robert W. Philip

AN ALL-DAY conference with officials of the Priorities Division of OPM (Office of Production Management)* in Washington on August 26 gave a large group of trade magazine editors an excellent opportunity to learn of what this agency of the government is doing as its vital contribution to the national defense program, how it functions, the steps it has taken thus far; and to determine what is expected of American industries under this program.

The conference, one of several being conducted by OPM with various groups touching industry, furnished also an insight into the seriousness of the situation as to supplies of essential materials and equipment and the far-reaching significance to industry and commerce of all kinds in what further restrictions and controls lie immediately ahead in this gigantic task of conserving the nation's supplies of materials and their necessary allocation to direct defense work.

It was intensely sobering to learn how critical the shortages are in many materials. Time and again it was stressed that the primary task confronting this nation today is the implementing of its defense program. Those charged with this duty, with no intent to penalize non-defense activities, are realists, and frankly state that we are well into a war economy which, in order to meet the needs of the defense program, requires sacrifice by non-defense industries, and penalties upon them in painful degree in order that the timetable of the defense program may be met without fail.

OPM is the branch of the Office of Emergency Management (OEM) charged with the responsibility of producing needed materials *on time*, for the defense program. The Priorities Division is the branch of OPM with the task of seeing that schedules of production of the elements of direct defense shall not be dislocated because of a lack of supplies—either materials, or equipment, or anything else; its job is to see that defense work and defense requirements get preference over every other activity and enterprise in national affairs today. They have been given the job and the unquestionable authority to do it.

Defense Needs Come First

The division operates primarily through a method of putting preference or priority ratings on defense contracts, and that gives that contract a "green light", and, through arrangements for extending this rating, any and every item necessary to the production, on time, of the finished product involved, also receives priority on down the line, all the way through to the basic raw materials involved. This of course means interference with normal industrial operation, and dislocations in the country's normal economic procedure; but OPM proceeds always from the starting point that defense needs must come first. They say, "We want to be sure we have plenty of guns and tanks and ships and airplanes and bullets—and that we have them *when we need them*, even if we have to take steel away from automobiles and aluminum away from ice boxes and copper away from water pipes."

To say that this effort will reach every industry and affect its operations in a vitally painful way, that it will affect every person in this nation to a point of sacrifice—and that it will do so immediately in places where it has not yet struck—is a mild understatement of conditions as disclosed by the Washington conference. It may appear to be a laboring of the point, but evidence disclosed by the OPM conference makes it strikingly clear that actions thus far applied are merely the beginning of a strict and wider control of industrial operations which OPM must immediately apply for the execution of its tremendous task.

Priorities and Textiles

The direct effect of priorities on textiles to date has been mainly seen in two areas: (1 the freezing of all of the silk supply in this country—following the presidential embargo against further shipments of silk from Japan—which deprived full-fashioned knitting mills of their primary source of raw material; and (2) the OPM order allocating a percentage of our rayon production to full-fashioned mills and other former users of silk. The cotton-textile spinning and weaving branch, and the woolen branch, with apparently abundant supplies of raw materials for processing, have not felt—and probably will not feel—any direct priority action in connection with their raw materials, but, requiring as they do, vast quantities of auxiliary supplies and materials, essential to their processing, which consume materials such as steel, copper, aluminum, chemicals, etc., from fields in which OPM through priorities or mandatory control has begun to operate with startling force and extent, are now beginning to feel the effects of shortages in these fields; and their suppliers in turn are finding it more and more difficult to procure necessary materials essential to the making of their own products.

The speed with which OPM has moved as far as it has gone in its initial efforts, as well as the suddenness with which it must act when a situation as to any material or supply appears, was one significant impression gained in the conference; and this leads to the positive conclusion that "from here on out", as inventories of supplies and equipment and repair parts in the textile mills, for example, become depleted, the problem of securing replacements will become more and more critical—and that sooner than anyone who has not come into close view of the picture as a whole may realize.

Already a number of mills have felt the "pinch" in this direction, with the result that there is a stream of inquiries, increasing daily, as to what the situation is, and what it is going to be. "What can we do to secure preference rating or priority for our products?", is a question being asked of every source of information in the industry. The OPM officials at the conference covered every phase of their procedure, and clarified many confusing points. The entire program is staggering in its vastness and complexities, but in an effort to provide the answers to at least some of the fundamental questions in the textile man's mind, a greatly simplified and skeleton explanation will be given of the program, as it affects textile manufacturers, on the ba-

(*) A few days following the conference mentioned here, and after this report was written, President Roosevelt by executive order re-organized the defense set-up, by putting all supply and priorities affairs under a super-board headed by Vice-President Wallace, with Donald M. Nelson as the Director of Priorities, succeeding E. R. Stettinius, Jr.

Another change was to create under OPM a division of civilian supply, headed by Leon Henderson, which detaches this function from the former OPACS, and brings the matter of civilian supply of materials directly under OPM, with Mr. Henderson retaining direction of price administration under his original agency.

It is not believed these changes will greatly alter the fundamental procedures as to priorities discussed here.

sis of information secured at the conference.

How Priorities Operate

For purposes of efficiency, the priorities system operates in two spheres—military and non-military. In the military sphere it operates under the Army and Navy Munitions Board—controlling requirements directly for the defense program—subject to the supervision of the Priorities Division of OPM. As mills operating on orders purchased by defense agencies already know, when a contracting officer for any of the armed services awards a contract, he can assign a preference rating which gives the contract, and materials needed for its execution, priority over orders with inferior or no preference rating. The degree of preference of course depends upon the relative importance of the item in the defense program. Furthermore, the assignment of preference ratings by these purchasing arms of defense services is restricted to items which appear on what is called the priorities critical list, a listing of some 300 items, which is reviewed monthly. These items are largely of a military nature and on them Army and Navy orders can be given automatic priority in the military sphere. A preferential rating thus applied to a contract, by a contracting officer in the field, carries the same force and authority as a priority rating given directly by the Priorities Division.

The highest rating in the priorities system is Double A (AA) and this is reserved only for extreme emergencies. The usual ratings in order of precedence are: A-1-a, A-1-b, A-1-c, etc., down to A-1-j; then A-2, A-3, A-4, down to A-10. These A ratings are assigned to defense orders only. Civilian ratings range from B-1 down to B-8.

Where OPM Come In

For orders going into defense, which are not on the critical list and therefore are not subject to rating by the contracting officer, application for a priority rating must be made by the supplier (in the case of our illustration, the mill) directly to the Director of Priorities, Office of Production Management, Washington, D. C. The form provided for this purpose, and available from OPM in the desired quantities, is known as PD-1. When a rating is given, it is issued to the supplier on Form PD-2, on which the rating, A-1-a, etc., is designated.

Now, in order to get priority rating on materials required for the execution of the order, the mill secures what is known as an extension, given on Form PD-3, which carries the rating established for the particular order in question, and which the mill passes on to the suppliers of its required materials and equipment, and these things then automatically receive the same rating. The delivery date is of extreme importance, obviously, for one of the major purposes of a preference rating is *to assure delivery by the required date.* This does not mean, however, that a higher rating takes absolute precedence over an inferior rating. For instance, if a plant has one contract with, say, a rating of A-1-j, for delivery on October 1, and receives a contract with A-1-a rating for November 1 delivery, *if* the A-1-j order can be delivered on October 1 *and* the A-1-a order delivered on November 1, all well and good; but if the execution of the delivery date on the inferior rating would cause delay on delivery of the higher rating, then the A-1-j must be deferred whatever time is necessary to assure proper delivery on the A-1-a.

Now we come to the B ratings, which are usually given to orders for civilian uses or perhaps to orders indirectly related to defense. These, like orders for materials not on the priorities critical list, must be applied for to and issued by the Director of Priorities directly. Form PD-1 again is used, and the Director of Priorities, on the basis of relative need and supplementary evidence submitted, assigns what to him seems to be the proper rating. This particular order, and, through extension on Form PD-3, the materials and supplies needed for its completion, carries this rating all the way back until it is executed.

All of these priority and preference ratings and certificates are issued by the defense agencies and OPM to the prime contractor—the supplier of the finished end-goods or products. If a mill is making, say, yarns for a customer who in turn is supplying his product under priority, the mill then is a sort of sub-contractor, and must secure, on Form PD-3 from his customer, that customer's preference rating, and this is applied to the yarns; just as a mill with a direct defense order for, say, duck, would pass on to the supplier of materials needed for its production, on Form PD-3, its own preference rating.

Thus, for application for a preference rating, on a particular contract, whether for defense or non-defense purchases, the procedure is relatively simple: A mill supplying an item on the critical list receives its rating from the contracting officer buying the goods; the contracting officer likewise countersigns the extension of this rating for the mill to pass on to its own suppliers. On any other contracts than those for goods on the critical list—direct defense, indirectly for defense, or for civilian needs—the mill secures Form PD-1 from the Director of Priorities, and makes application for a rating. Form PD-1 provides space for a statement of the use for which the product is to be made, and all other essential information, but, particularly on contracts that are not directly for defense, the applicant should accompany the application with all possible supporting information as to its necessity, on such points as preventing local unemployment, etc., to prove the importance of the contract. The form calls for a list of the suppliers from whom the mill would secure needed materials; it is necessary to submit a separate form for each supplier involved, but not necessary to submit a separate form on each single commodity to be procured from a given supplier.

OPACS Can Recommend Ratings

While OPM has foremost in its procedure the provision of goods for direct defense, its officials are realistically aware of the necessity for goods of many kinds that go into non-defense or

"It should be made clear that, while the priorities system is designed primarily to implement the production and acquisition of material for the Army and the Navy, and is also used to aid the defense needs of Great Britain, priority help can be and is given to important civilian projects. It would be quite erroneous to assume that all defense needs come ahead of all civilian needs. Obviously the most important civilian need is more important than the least essential military need. * * *

"Take the case of a great power plant. It may be difficult to trace the construction of such a plant directly to the defense program. And yet no one would debate the fact that power is an essential part of our economy and that the overall defense picture will be benefited by adequate power resources. In such a case, it is desirable to encourage the production of power facilities, by priority action of some sort if need be.

"Or consider the case of a large factory, employing thousands of men engaged in the production of purely civilian commodities. This plant may have little or no direct connection with defense, and yet it is still desirable that such a factory not be closed down, or the men thrown out of work, through the unwise application of the priorities system in such a way as to unnecessarily cut off raw materials or other supplies.

"In short, the nation is faced with the task of carrying on a general, overall, total defense program in which military and civilian needs are closely integrated and carefully balanced. And the priorities system, which can be used to give aid where aid is essential, in either the military or non-military sphere, is a valuable instrument in achieving this balance."—Dexter S. Kimball, chairman of the tools and equipment group, priorities division, OPM.

civilian uses, and are eager insofar as is consistent with the defense program to take care of them. OPACS (Office of Price Administration and Civilian Supply) is a companion agency in OEM, and one of its functions is to safeguard essential civilian supply. There has been some unwarranted misunderstanding concerning the relationship of these two agencies. OPACS does not *issue* preference ratings, but it can and does make recomendations to the Priorities Division of OPM for preference ratings on specific contracts for essential civilian needs, and whenever consistent with defense requirements, OPM follows these recommendations. Answering a question as to the relationship of these two agencies as to a preference rating on a contract for civilian or other non-defense use, an OPM official stated that "it is usually a case of which one of us gets there first".

Mandatory Allocation Orders

These preference ratings applied to specific contracts of end-products, and, through extensions to the materials required for these contracts, both in the form of individual certificates, which we have described, and in several other special forms which will be described later, represent one of two major controls utilized by OPM. They attack the problem of supply control and delivery from the top. The other device enters the picture from the bottom, and is an industry-wide control on the distribution and use of *scarce materials*. This is the broadest and severest form of control, and at present the Priorities Division is administering orders which provide such control over more than 20 materials and classes of material. Some of these are: steel, pig iron, aluminum, magnesium, tungsten, nickel, cork, and synthetic rubber.

This form of control is imposed when it becomes necessary to overcome difficulties caused by serious shortages. It serves to apportion the existing supplies of raw materials more equitably, so that one manufacturer is not without inventory while another has a heavy inventory that is not being used. Aluminum is a good example. Virgin aluminum is being produced at a rapidly increasing rate. Practically all of it goes into primary defense channels—airplanes, for example. Producers of aluminum are required to submit their shipping schedules to the Aluminum Branch at the beginning of every month, and this production is then allocated to users who are manufacturing defense products. Whatever is left over is then available for apportionment in accordance with a program of OPACS to civilian uses. These mandatory, industry-wide controls are issued under what are known as M-orders.

Thus far, with the notable exception of the silk order, this form of control has not affected textile manufacturing as it is discussed here, but is mentioned to complete the picture of how OPM operates from the bottom as well as the top in controlling vital materials.

"Blanket Rating Orders"

Returning to the preference rating device—"from the top"—there are several variations of this. One is called "limited blanket rating orders" which are given only to companies engaged almost wholly in defense work; manufacturers of machine tools, engines, propellers and numerous other heavy metal goods, for example; or a concern such as a textile machinery shop with a large proportion of its capacity diverted to direct defense work. No information is available as to whether individual cotton mills have applied for, or have obtained, this type of order.

Defense Supplies Rating Plan

Then there is an optional plan known as the Defense Supplies Rating Plan. This plan recognizes the need in the case of a manufacturer who, for example, receives orders from jobbers and wholesalers, and requires something of an inventory in order to meet delivery dates. Its purpose is to assure the provision in certain well-defined cases of scarce materials, including parts and assemblies, which are essential to the production of defense supplies: (1) in quantities necessary to maintain the flow of raw materials and work in process for production essential to defense, and (2) to permit production of defense supplies for stock to the extent that such production is essential to defense. Scarce materials means the materials, parts and assemblies which the producer cannot obtain sufficiently promptly to fulfill his required schedule of deliveries of defense supplies. Defense supplies means the materials, parts and assemblies entering directly or indirectly at any stage of production into material for delivery under any contracts or orders placed by or for the account of the recognized defense agencies of the government.

It is an optional plan. If a producer can now obtain the materials essential to manufacture defense supplies to meet his schedule of deliveries, the Priorities Division expects he will continue to operate without the assistance of the plan. If it is invoked, he reports, on Form PD-25, the total dollar volume of his business, and the dollar volume of his defense supplies, and his total scarce materials requirements. If his application is approved, that proportion of total scarce material requirements which defense supplies dollar volume bears to total dollar volume will determine the quantities of scarce materials for which a preference rating is required. For example, if in terms of incoming orders, shipments or production, the defense supplies volume is 50 per cent of total volume, then the producer will be entitled to receive a preference rating on 50 per cent of his requirements of scarce materials; these ratings are issued for three months at a time.

Project Ratings

Another instrument is the Project Rating, application for which may be made on Form P19-A, for the construction of a new plant to manufacture products for defense use. These ratings are self-extendable. The intent of the project rating is to make available materials needed for construction of the new plant in time to meet the approved schedule.

Another device, not completely effectuated at this writing, would deal with repair and maintenance rating. Industries placed under it would be eligible for A-10 ratings to apply to their orders for necessary repair and maintenance parts. This A-10 rating is not automatically available to any concern. Application must be made for it to the Priorities Division. If the application is granted and the rating obtained, the service of this order on suppliers will insure preferential delivery. The plan would provide that a supplier, when served with a preferential rated order, may in the same manner extend the rating to his own suppliers.

Some practical difficulties have been reported by several suppliers of equipment and materials to the textile mills in connection with orders placed with them by mills already operating under preference ratings. Apparently some of these mills assume that simply to advise their suppliers of their priority or preference rating is all that is necessary. (It might have worked that way in the last way, but that is not the case now.) Each mill with a preference rating should extend that rating to each of his suppliers. This can be done, as explained, on Form PD-3, then that supplier in turn may extend that particular rating, for that particular order, on to his suppliers, and so on down the line.

So, with no pretense at completeness, perhaps the foregoing may serve to clarify some of the fundamentals of procedure that may have been confusing to some not yet intimately and directly affected by priorities. Looking at the matter broadly, it is evident, to quote one of the OPM spokesmen, who said that "the next few weeks will bring a period of public confusion, because government restrictions will come as a shock to the people. The first period will be one of privation. And even greater privations may be suffered in the future. But we will have to get used to the dislocation because we all know we can't live on the same earth with Hitler.

"We are moving into a war economy. War economy is not a comfortable economy. We can have all the guns and some of the butter, or all of the butter and some of the guns, but we cannot have all the guns and all the butter."

It was encouraging to learn that through its division of conservation, OPM is striving toward the development of substitute materials for many of the things on which defense requirements have created shortages for civilian use. Information as to some of these may be forthcoming shortly. Meanwhile, as another spokesman pointed out, "The outlook on the whole is not encouraging from the standpoint of the manufacturer of civilian articles. The situation is here with us, however, and that means we must all be prepared to make adjustments in our businesses and in our personal lives. Up to now, we have had a sufficient supply of raw materials in nearly every case to fill primary defense requirements and many of the civilian requirements as well, but there is no use trying to hide from the fact that nothing we can do, nothing anybody can do, will magically produce enough of all of these materials, right away, to fill both military and civilian needs.

"Shortages are developing—and they will get worse before they get better. We will all have to make sacrifices. We can make these sacrifices cheerfully if we all understand what the choice is, what the alternatives are, why we are doing the things we do. If we have such understanding, then on that foundation we can build a firm co-operative spirit and a full-fledged willingness to pitch in and do the job we have to do. When priorities hit you—and they will—remember, it's a sign that national defense is booming."

Blends of Cotton and Flax on Cotton Mill Machinery

THE FOLLOWING information on processing a blend of flax and cotton is abstracted from the July 1941 issue of "The Traveler", published by the Victor Ring Traveler Company. This article concerns processing the blend on standard cotton mill machinery, and was prepared by a mill man who has had experience running the mix.

The method described here is for the preparation of a relatively coarse yarn to be used in semi-linen crash fabrics; and the flax fiber used was not cut to a uniform length of staple. The bale of the flax fiber was first run through an opener which has three Buckley beaters, each turning at 1000 to 1200 R. P. M. The action of the beaters separates the fibers sufficiently for them to run well on the following processes. This is three process picking. In one process picking the mixes are made in the hoppers.

The flax was then run through a breaker picker by itself and made into a lap of about 20 oz. per yard. The cotton was also run through the breaker picker alone and made into a lap of about 13 oz. per yard. Three of these 13-oz. cotton laps were put on the apron of an intermediate picker. together with one 20-oz. lap of flax. They were thus combined into one mixed lap of 15 oz. per yard, making 4 of a draft at the picker. This provides a blend of 34 per cent flax and 66 per cent cotton.

Four of these mixed laps are then run through a finisher picker and made into a 15-oz. for evenness. The picker speeds and beats per inch normally used for cotton were found satisfactory for this mixture. It is recommended that the cleaning bars on the intermediate and finisher pickers be covered with metal to avoid excessive loss of flax fiber.

To run the mixture successfully through the cards, a fancy was used at all times, and an apron to hold the web from the doffer to the calender rolls. It was necessary to cover the lickerin screen completely to prevent the loss of flax fiber. When a perforated screen was used, it clogged up quickly and as much as 10 per cent of waste resulted. A 70-gain sliver was made on the cards.

The apron arrangement referred to above is actually a traveling belt that carries stock from the doffer to the calender rolls. The rolls are at the outer edge of the doffer instead of in front, as on regular carding. When the sliver leaves the calender rolls it goes through the coiler as in the standard carding process.

Since this type of blend tends to run somewhat tighter than straight cotton. it was found advisable to change the gears in the coiler.

The settings and speeds on the cards were as follows:

Settings

Licker-in to cylinder	.007
Licker-in to feed plate	.010
Top knife	.012
Bottom knife	.010
Cylinder screen back	.012
Cylinder screen front	3/16"
Cylinder to doffer	.007
Doffer to doffer comb	.007
All flats set	.012

Percentage plates were set so that 3 per cent to 4 per cent flat strips were taken out.

Speeds

Cylinder	165 R.P.M.
Doffer	11 R.P.M.
Licker-in	430 R.P.M.
Flats	2.5 per minute

Two processes of drawing were used, which produced a finished sliver of 70 grains. Although front roll speeds as high as 325 R.P.M. were used, it is sometimes preferable to reduce this to 300 R. P. M. or less to prevent end breakage that would cause trouble in following processes. Roll settings for the drawing frames were wider than usual because of the bulk being handled, the varying length of the flax fibers, and the limited preparation of the flax fibers in the picker room. These settings must be watched carefully, since it is sometimes necessary to change them from day to day.

On this blend the slubbers ran .50 hank and .70 hank with 1.10 twist. On a 12 x 6 slubber, the spindle speed was 650 R.P.M. Here again a slower spindle speed may be found advisable, possibly between 550 and 600 R.P.M. The twist naturally depends greatly on the staple of the cotton used. It is also the practice in some mills to use a higher twist for .70 hank than for .50 hank.

Intermediates ran 1.25 hank and 1.50 hank with 1.25 and 1.30 twist respectively. The spindle speeds were 850 R.P.M. on a 10 x 5 intermediate, but in some cases it may be well to cut this speed to 750 R.P.M. The humidity should be carefully controlled at every process, and held between 55 per cent and 60 per cent.

The method described above is for running mixtures containing about 11⅓ per cent flax, but it is substantially correct for any blend ranging between 25 per cent and 50 per cent flax. A very definite loss of flax occurs in processing. A mixture starting at the picker room with 33⅓ per cent flax usually finishes up after spinning with about 28 per cent. Every precaution should be taken to prevent this flax loss at all processes, especially the picker and cards.

The same care should be observed throughout the spinning process for best results. Check the humidity often and watch the speeds to prevent undue breakage and loss of flax fiber.

The many factors unlike ordinary cotton spinning make it advisable to give special attention to the selection of a traveler. Getting the proper design for the mix you are running will save time and trouble and deliver a better yarn.

Bibb Auditorium Dedicated at Columbus

An exterior view of the new **E. T. Comer auditorium** at the Bibb City plant of **Bibb Mfg. Co.**, made by "**Cotton**" on the day of dedication . . . . . .

Some of the visitors and Bibb folks snapped by "**Cotton**" during the buffet luncheon which followed the dedication exercises at the new E. T. Comer auditorium.

Top row, left to right, **R. E. Barnwell**, of Lockwood Greene Engineers; **Ben T. Huiet**, Georgia Commissioner of labor; **Theo. M. Forbes**, secretary of the Cotton Manufacturers Association of Georgia; and **A. A. Drake**, vice-president of Bibb.

Second row, left to right: **Scott Russell**, executive vice-president of Bibb; **John S. Turner**, superintendent of the Columbus plant; **W. Frank Lowell**, vice-president of Saco-Lowell Shops, Boston; and **Lawrence R. Brumby**, general superintendent of Bibb.

Third row, enjoying the informal luncheon, left to right: **William D. Anderson**, president of Bibb; **Donald Comer**, chairman, Avondale Mills, who made the dedicatory address; and **M. W. Rozar**, director of sales development of Bibb Mfg. Co.

Donald Comer Speaks at Opening of E. T. Comer Memorial

AN INTERESTING recent event was the dedication of a beautiful new auditorium in the village of the Bibb City plant of Bibb Manufacturing Company, near Columbus, Ga. The structure, shown in the accompanying illustration, now serves as the center of many of the social, athletic and other activities of the community.

The new auditorium was named in honor of the late Edward Trippe Comer, former head of the Bibb Manufacturing Company, and was dedicated to his memory with appropriate exercises on Friday, July 25. Donald Comer, chairman of the board of Avondale Mills, Sylacauga, Ala., a nephew of E. T. Comer, was the featured speaker and made the dedicatory address. His father, the late Braxton Bragg Comer, who founded the Avondale Mills, and Edward Trippe Comer were brothers—each heading for many years a major organization in the southern textile industry.

In attendance at the exercises was Mrs. E. T. Comer, widow of the former Bibb head; as well as Wm. D. Anderson, present president and chairman of the board of Bibb; James H. Porter, vice-president; Scott Russell, executive vice-president; H. W. Pittman, agent of the Porterdale mills of the company who was in charge of its social service and educational activities; Lawrence R. Brumby, general superintendent; and many other officials. Also present were specially invited guests identified with various branches of the textile industry.

Representatives of various organizations in the Bibb City community expressed appreciation for the new building, in brief preliminary exercises which were under the direction of Mr. Pittman. Musical selections were rendered by a group of the Bibb City Girl reserves. Following the exercises, a buffet luncheon was served to the out-of-town guests by the Woman's Club of Bibb City.

E. T. Comer, for whom the new building is named, became president of Bibb in 1913, serving until 1920, when he became chairman of the board and was succeeded as president by William D. Anderson. Mr. Comer was chairman until shortly before his death in 1926, and Mr. Anderson succeeded him in that position. Three of his great-nephews — Hugh Comer of Macon, Frank Comer of Eufaula, and Robert Train, of Savannah, are now associated with the Bibb management.

CURRENT TEXTILE TOPICS

Abnormal times now the normal

PROGRESS UNDER Defense is a revolving condition, a state of flux in which one might say that production itself is the only normal thing left. And even this has its qualifications, aside from the mere operation of machinery. There is the need to restrict styles for efficiency and also the disorganizing influence of lost skilled help going from the mills to other Defense industries.

Developments of the summer in the way of price ceilings on yarns and cotton goods were complicated by the sharp rise in the raw staple. Then came a climaxing problem in the crux on raw silk eventuating because of the imbroglio with Japan. Silk is a very minor element in textiles today, in percentage, but an all-important one in hosiery. Its requisition for military need alone was far-reaching in effect.

Here is a situation involving both textile manufacturers and the public. Nylon has made a remarkable advance in less than two years, but remains only around 20 per cent of the women's full-fashioned hosiery. The quick demand upon such textiles as cotton and rayon to take the place of silk imposes a tremendous task when such textiles already are under the double strain of military and civilian requirements.

Early word from Washington was that the Department of Agriculture was ready to show how 150 styles of hosiery could be made from Washington. In the market it was forecast that cotton yarn would be in heavy demand for hosiery and that lisle stockings would be popular, provided the material for them was available. But there was a big "if" in this provision.

Other pressures upon raw cotton

It is called to attention by W. Ray Bell, president of the Association of Cotton Textile Merchants, that the stringency of silk is not the only problem in textile raw materials. He cites shortages developing in flax products, jute goods and various fibers from which cord and twine are made as factors likely to aggravate congestion in cotton-textile mills. Extra pressure already has been seen in goods made for bag manufactures to replace burlap constructions.

Rise of raw cotton nearly the end of July to nearly 18 cents a pound for spot in the New York market could not be attributed to this situation. In view of the tremendous supply held by the government, the actual stocks in the country remain ample for even the extraordinary rate of consumption by the mills. This is true even if the 1941 crop only approximates the domestic demand for a year.

Actual and available supplies, however, are two different matters. The available supply is a matter dependent upon political considerations, just as has been the high market level of the summer. Although it might prove costly to the nation in the long run, the farm bloc appeared strongly determined to continue a restricted policy in disposing of its surplus rather than risk weakening the support of high prices to growers for the time being.

Changing situation for cotton goods

Mills have had a difficult time in trading through the summer because of relations with the OPACS and uncertainty over the price of raw cotton. August found trouble in covering requirements, both because of the price complications and because in many cases manufacturers were out of the market for shipments to the end of this year. Furthermore, there was the feeling that more pressure for priority goods wanted by the government was in sight.

Some expansion of business was seen in August in staple lines, in efforts of buyers to relieve a shortage. Mills figured that they could take care of more needs in the later months of the year, for two reasons. They were hampered through the summer both by the shortage of power and by vacations.

Yet though sales were being made as far ahead as March of next year and mills contemplated third shifts in some cases, the industry was still restrained by prospects of expanded government demand. For example, it was noted production of osnaburgs, for one thing, might need to be doubled. This suggested that other production might have to be diverted to this division.

Consumer goods standardization

Little has been heard in cotton goods of simplification in the lines of production. Maybe it has been accepted as an automatic concomitant of the situation. Obviously the enforced emphasis upon priority constructions would be paralleled by restriction in civilian output.

Planned simplification has become a prominent matter in other industries, however, the need being recognized long ago by wool manufacturers who were among the first to face pressure from the government. In a general sense the standardization of consumer goods and limitation of variety has been recognized as a measure of efficiency, allowing increase of production with the same amount of equipment.

Here, incidentally, is one of the paradoxes of economic life. When sellers are striving to promote consumer demand, style promotion is one of their means to the end. But when buyers are freely seeking merchandise, as at present, producers are constrained to offer a more limited variety.

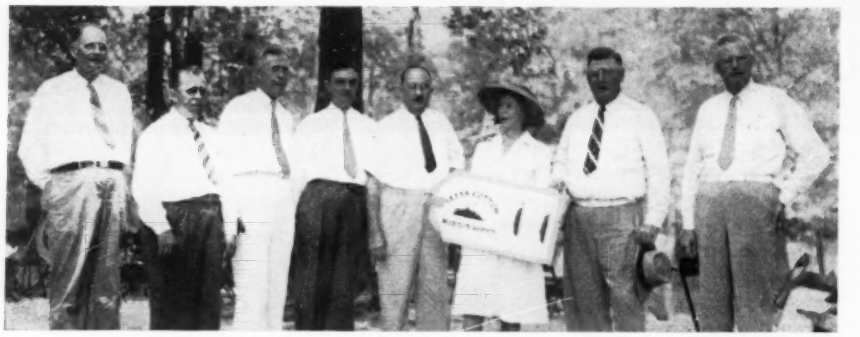
New England Mill Situation

PRACTICALLY all summer the confusing action on ceiling prices for yarns and goods kept the market for New England cotton mills in an unsettled position. As late as the middle of August, the market for combed yarns was declared to be about as chaotic from the price standpoint as at any time in two months. The OPACS action, which the trade deplored because of what was considered a course based upon inadequate preparation and investigation, accordingly has had an unfortunate aftermath.

Mid-August found adjustment in ceiling prices on combed yarns still being deferred, pending investigation covering mill costs and profits being made in the Carolina district at the request of OPACS. At the same time nothing was being done about ceiling prices in carded yarns. The result was a rise here in carded yarns within striking distance of the basis for the finer combed numbers, making a disturbing and maladjusted situation.

Meantime, the producers of fine goods were in a quandary as to when negotiations with the OPACS would bring something definite in yarns. Naturally the business in cloths was contingent upon costs of materials, so commitments ahead were being made impracticable. Buyers were reported to be ready for taking substantial amounts of cotton goods, but there was nothing to do but mark time.

Tags for Delta Cotton Identification



Mrs. Mildred Barnwell is shown with a replica of the new Delta cotton identification tag. At her right is Oscar Johnston. The others are directors of the Delta Council.

DELTA staple cotton, grown in the Yazoo-Mississippi Delta region, may hereafter be identified as such, and the practice of "bootlegging" cotton from other sections under Delta gin tags eliminated. An identification program for Delta cotton has been adopted by the Delta Council. A trade marked outside tag with lead seal has been devised, to be attached to cotton grown in the Delta. The Delta Council is continuing owner of the tag, and use of it is leased to co-operative gins. The ginner agrees to place none of these tags on cotton not warranted in a signed statement of the grower to have been produced in the Mississippi Delta. Serial numbers will be designated for each co-operative gin; and each gin will have a number which will mark the seal when the tag is placed on a bale.

It is pointed out the program will be of value, to ginners as a means of advertising their gins; to buyers in providing them with a superior and recognized staple; to compresses in maintaining accuracy of serial numbers; and to spinners by assuring them of a product for which they are paying a premium.

The program was approved at the director's meeting of the Delta Council in August. Oscar Johnston, president of the National Cotton Council, and Mildred G. Barnwell, executive secretary of the Southern Combed Yarn Spinners Association, whose members process most of the Delta grown cotton, were among the visitors, and addressed the meeting.

Mills very active; gain in spindles

Mills of the district of course have been running to capacity through the summer, in spite of the small rate of transactions in goods pending clarification of the price complexities. In fact buyers in many cases have been upset by delays in delivery of seasonal cloths for the civilian trade. Late deliveries reflect the influence of priority business and, while consumers are disappointed, the mills can do nothing about the circumstance.

Complicating the conditions in cotton yarns, the silk development at midsummer put an extra strain upon supplies of spun cotton already pressed to meet the needs under the defense program. Hosiery mills were anxious for combed cotton yarns to use in tops and welts, thus to eke out such stocks of silk as they had on hand when the government took action to save all future silk for defense purposes.

Reflecting the defense and other business of the mills, cotton spindles of New England ran through June at the rate of 330 hours on the average for 5,643,660 in place. During the month 5,026,140 spindles were active, or a notably high percentage of those in place. In the second quarter of 1941, the rate of activity was the best for about 20 years.

At the low in 1938, the section had slightly above 20.5 per cent of the nation's active spindles and in June of this year, a bit over 21.8 per cent. The percentage gain was on a generally increased active spindleage, moreover, with New England showing an upturn from 4,341,078 in June of 1938 to 4,512,-164 in the same month of this year.

Accompanying good profits for mills

Once more the existence of a wave of national prosperity is giving the mills of New England a chance to run broadly and profitably. The wool manufacturers, who have had big orders almost from the inception of our National Defense Program, show up conspicuously in the recent announcements of increased dividends, yet cotton mills of New England also figure prominently in larger payments.

Changes in the dividend picture include increased amounts where payments have been made in recent years and resumptions where stockholders had not been getting any returns for some time on their investments. An early August tabulation by the Boston News Bureau, textile mills generally, indicates the New England situation:

	Earnings Per Share	
	1941	1940
*Am Woolen pf	$7.00	$3.00
Pepperell Mfg.	7.00	6.00
Berkshire F Sp 7% pf	10.15	5.25
$5 pf	7.25	3.75
*Sanford Mills	1.50	.50
Nashua Mfg 1st pf	7.75	....
*Arlington Mills	2.50	.50
Merrimack Mfg pf	10.00	5.00
Naumkeag Steam Cot	3.00	1.00
Nonquitt Mills	3.00	1.50
Arnold Print Wks pf	.75	....
com.	.50	....
Sagamore Mfg	3.00	1.00
Bourne Mills	1.70	.60
Nashawena Mills	1.00	.50
Fruit of Loom pf	.60	.25
Gosnold Mills pr pf	2.50	6.25
6% pf	3.00	....
Quissett Mill	2.50	....
Soule Mill	3.00	1.00
Cabot Mfg.	1.00	....
Pilgrim Mills	2.00	....
Border City Mfg.	1.00	....

*Wool.

Such units as the Kendall Company and the Pacific Mills, not reported above, announced greatly increased earnings and substantial profits for the first part of 1941. In the case of Pacific, this was contrasted with a loss in 1940.

It was notable that the mill conditions were promptly met by agitation for wage increases. Some advances were made in the month, moreover, first by wool manufacturers.

For the first six months of this year, consumption of cotton in New England amounted to 621,810 bales. This compares with 443,343 bales for the like period of 1940, marking an increase in 1941 of 40.3 per cent. Massachusetts accounted for 329,353 bales.

Suggestion Plan That Works

From a supervisor in an Ohio company comes this description of a simple common sense suggestion plan that works. He writes:

"Normally, ideas are advanced to the supervisor verbally. If it is a trivial item, the employee is thanked and action taken immediately.

"Where ideas have a lasting or repeated benefit, I sit down with him and help him write his idea to me in memorandum form in duplicate. Then I add any desired comments on an attached sheet of paper and, in his presence, send his original copy to my superintendent. When he sees the suggestion in operation, he is rightly proud and possesses a stimulus to try again.

"It is believed handling safety suggestions this way is responsible, at least in part, for the fact we've had no lost time accidents in our department for several years. I am of the opinion that my boys feel they are fairly treated."—*"Management Information", Elliott Service Co., Inc.*

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"THE SITUATION" as Seen Across an Executive's Desk

August 18, 1941

THERE ARE two major developments in the cotton-textile situation during the past month—the "ceiling" effects and the embargo on silk—which we shall take up in turn.

When we went to press last issue, the day after the grey goods ceilings revision had been announced, there was no time, of course, to give a reaction from the market viewpoint and at this point, after three weeks of trial, we cannot say whether or not these ceilings are being accepted. There are many critics among the grey goods manufacturers, some who are issuing statements both in newspapers and in the form of brochures and there has been some accusation of production shut-down because of the ceilings. Indications from the combed yarn area are that they are still trying to negotiate with OPACS for more equitable adjustments. And in the meantime, carded yarns are rampant as they are being quoted freely in the market at the same levels of the combed yarn ceiling. Indications are that carded yarn ceilings will be invoked before this month is out and it is understood that manufacturers from that group are to consult with OPACS shortly.

The Price-Control Bill

Two weeks ago the price control bill, evidently written by Leon Henderson or at least in his office, was presented in Congress by Chairman Steagall of the Banking and Currency Committee. This bill is one of the most dangerous bills ever introduced into our legislative halls. Study proves it to be the document of a would-be dictator of American economy. The "nigger in the wood-pile" in this bill seems to be in the clause, "By the words *The President*, it is meant any administrator of the bill".

In every phase of the bill the President is given sole power. A separate court or system of courts is to be set up under this bill thereby depriving industry of the right to appear before the Constitutional Judicial system of this country. And the bill is to extend over a period of time which is limited only by a proclamation of the President as to when it should cease operation. This bill does not automatically become void when the National Emergency is over, but can conceivably last forever.

While it may be true that this country should have a price control bill to prevent the specter of inflation from stalking the land, this particular document is not the type of bill which real Americans and a real democracy want. It is felt that the House Committee, which has had Leon Henderson on the stand for 10 days undergoing a gruelling cross-examination as to his intentions concerning the bill, will take further steps to prevent such legislation from obtaining a favorable vote. At this time Congress has adjourned until September 15 and the hearings will continue after that date. In the meantime, there is a lot that the average citizen can do to help guide a better type of price control legislation for proper presentation.

The Silk Embargo

Concerning the textile situation created by the embargo on silk, it has an almost negative reaction on the cotton-textile market for this reason alone: It takes a high grade super-fine number of combed cotton yarn for substitution on silk hosiery top, toe and heel. Such yarns were always used in silk stockings up until the time that silk became so cheap that all-silk hose were manufactured as more salable and because there was little if any additional cost. Since this time many spindles on those super fine numbers have changed over to coarser counts in which there was more production and more profit, certainly more market.

The result is that it is doubtful that enough super-fine cotton yarn could be obtained at this time to amount to more than a drop in the bucket in hosiery manufacturing. Certainly all of the newspaper publicity about 17 to 25 million dozen pairs of lisle hose to be manufactured for women's wear this fall and winter borders on the ridiculous. According to the Department of Agriculture estimates it takes a pound of yarn for a dozen pairs of hose not counting waste, and there just isn't that much super-fine cotton manufactured in the entire world today. It is understood that the British are offering these fine lisle yarns for delivery within 6 to 7 weeks but "at a price", and there is no guarantee that this production will be large or that it can safely arrive in this country due to the Battle of the Atlantic.

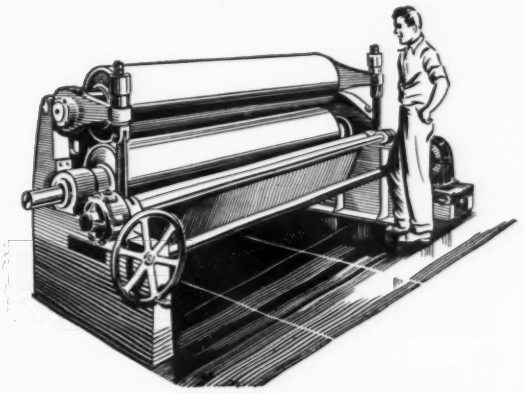
A survey of hosiery mills leads us to believe that when the present supply of silk is exhausted mixtures governed by the 10 per cent allocation of rayon will predominate until greater nylon production is issued. Most women prefer nylon hose anyhow due to wearability and sheer appearance and it is our prediction that the hosiery situation which is front page news will soon dissolve into an adjusted business with enough to go around made from better synthetics. One thing it may do, and that is to teach our lady friends more thrift in care for their hose, as it has become the custom for American women to discard a pair as soon as a stocking became snagged or worn at the toe or heel or with a small run in it. Many of these could undergo repair and be salvaged for further wearing.

One important angle on domestic fine cotton yarns is that they are being used to a great extent in defense work and manufacturers feel that there is no call for them to divert their shipments from National needs to woman's vanity.

The Army buying season is on again and many bids are on the verge of being opened. 8.2 Army twill, herringbone, both cotton and woolen underwear, socks, etc., will be bought in even larger quantities this year than last. This is indicated through the draft extension bill as new recruits are being called in and old ones kept, and our Army gradually being built up.

Record Consumption of Cotton

Whether it is due to defense purchases or not, the Census Bureau reported on August 15 that in the year ending July 31, 1941, 9,718,220 bales of cotton had been consumed compared to 7,783,774 bales the year before and 6,858,426 in 1938-39. At this time the mills are consuming 900,000 bales and more each month and it is not indicated that the activity will slow up. This past July 23,027,818 active spindles were in operation compared with 21,-919,000 the same month a year ago. The Government cotton report which was issued on August 8 indicated a yield this year of 10,817,000 bales, the smallest crop since 1935 and the Department of Agriculture has set parity at 16.42 cents with a cotton loan of 85 per cent of parity. There is no doubt that the farmers would have made a killing this year, would have been able to feel real prosperity through a cotton market governed by the law of supply and demand and bolstered by parity if it were not for the fact that members of OPACS staff have threatened in public speeches to place a ceiling on raw cotton which would hold it down. Last year the Government spent in cotton loans $153,000,000 in an effort to bolster the market up. This year a Government agency insists upon knocking the market down. Certainly the futures market has been more erratic the last two



New Micro-Set Padders speed up close matching

"The results obtained from our new Butterworth 2-Roll Micro-Set Padders have greatly surpassed our expectations.

"First, the Micro-Set feature has proved of real value and we are now obtaining, day in and day out, exact matches of shades such as previous experiences had led us to believe were not possible with a padder.

"Second, in addition to obtaining uniform first quality, our output has been substantially speeded up.

"Third, the operation of the machines, particularly color changes, is much facilitated by the stainless-steel rollers and tubs.

"We now have two of these 2-Roll Micro-Set Padders, one 18-inch and one 20-inch. Both these machines are driven by gear-reduction motors, and both are being operated in connection with Simpson Winders."

Here is another example of what *just two* modern machines will accomplish in a dye-house.

It may not be practicable to modernize your entire equipment at one time. But, if you adopt a policy of replacing old equipment as fast as possible with the latest developments, you too will be pleased at the extent to which each installation cuts down costs and boosts quality. Then, when textile production goes back to normal, you will be in position, because of your modern equipment, to meet *any* competition at a *profit*.

Our 121 years of experience in designing and building machinery for the wet end of the Textile Industry is at your service. The mission of our engineers is not only to *sell,* but to consider your problems, make recommendations as to the machines you need, supervise their installation and then see to it that you get the results you want.

Let us tell you how modern machinery, or improved plant layout, will help you to increase quality and production and lower costs.

H. W. BUTTERWORTH & SONS CO.
Phila., Pa., Serving the Textile Industry Since 1820.
Offices: Providence, R. I. and Charlotte, N. C. In Canada—W. J. Westaway Co., Hamilton, Ont.

***64%**

of equipment now in use in the wet end of textile finishing cannot operate at a profit in competition with modern machines.

*Proved by Research

Butterworth

weeks than in many years with cotton gaining and losing several dollars a bale in the course of a day's time.

Research and Promotion

Under the heading of research and promotion we list the new plans of the Cotton-Textile Institute which has employed John Murray, former editor of the cotton section of the Journal of Commerce, to handle all publicity work and public relations for the Institute. It is understood that Mr. Murray will work very closely with Ed Lipscomb of the National Cotton Council and that all of their efforts will be coordinated so that there will be no overlapping. Miss Virginia Jewel succeeds Miss Nova Eisnor and will act as fashion consultant, the position so ably occupied for many years by Miss Catherine Cleveland who resigned a year ago. It is understood that the National Cotton Council was successful in obtaining a 90 per cent sign-up on their spinners' agreement and that within a short time definite plans will be announced as to the coming year's activities on their promotion program. It is to be expected that after this first year there will be no effort to require 90 per cent cooperation from the mills. We firmly believe the results they will see during the coming year will automatically realign them with the Council thence forward.

Bale Labeling

A new move in the right direction has been undertaken by two organizations of cotton farmers, shippers, and ginners—the Delta Council in Mississippi and the Arkansas Agricultural Council, which plan to tag all cotton bales grown and ginned at those two territories this season. The tags will be colorful, easily spotted, and placed on a bale with a box car seal. They are copyrighted and any use of these tags on cotton other than that grown in the Mississippi or Arkansas Delta regions will be subject to indictment under the ICC laws. This program was launched at the instigation of the mills which purchase cotton from these areas and has been endorsed by consumers of Delta cotton who hope the plan will be completely successful. At the same time it is understood that the western or irrigated cotton sectors are considering a similar program of labelling their cotton which it is pointed out is good cotton but according to the spinners does not take the same finish as rain watered cotton and therefore cannot be mixed.

And like Congress, which is worn out with price control dickering and other things, we will adjourn here until September 15.

Institute Adds to Personnel

The Cotton-Textile Institute has announced an enlargement of its promotional activities in line with the inauguration of the joint finance program conducted in co-operation with the National Cotton Council. For the two organizations, the Institute representing manufacturers and the National Cotton Council the raw cotton interests, a fund of five cents a bale on this season's American cotton crop now seems assured.

The main objective of the program of the two groups will be to keep moving upward the basic domestic trend in cotton consumption for years to come with the aid of research, more effective merchandising, the development of new uses and a wider fashion appeal for cottons.

In order to carry out this program, the Institute has made a number of changes in personnel. Miss Virginia Jewel has been named fashion director. Through an enlarged staff she will make available a complete reporting and publicity service covering fashion developments in cotton fabrics, apparel and home furnishings. She will also act as liaison in fashion matters between the mills, converters, and cuttersup, develop promotional tie-ups, provide fabric and garment exhibits, conduct market surveys, give talks to college students and continue editing the fashion section of the Cotton News Letter. Miss Jewel was formerly associate editor of the Butterick Fashion Magazine.

John W. Murray, who for the last six years has been textile editor of the *Journal of Commerce*, will have charge of the public relations division of the Institute and will work with Ed Lipscomb of the National Cotton Council in the direction of the joint promotional program.

Charles K. Everett will continue as director of merchandising. During the coming year his office will greatly expand the volume of information and merchandising aids customarily given to retail merchants and will further develop the cooperation between retailers and mills in promoting cotton products. Mr. Everett will also continue to work with industry and government research agencies in developing new uses for cotton, especially in the industrial field.

John T. Wigington, of Anderson, S. C., as previously noted has been placed in charge of the newly established cotton research division of the Institute. He was formerly associated with the cotton research activities of the Department of Agriculture and until recently was supervisor of the fiber and spinning laboratories of the department at College Station, Texas. His duties will include the co-ordination of cotton laboratory research, and formulation and encouragement of new research projects and the application of laboratory discoveries to mill operations. He is stationed at Clemson College, S. C.

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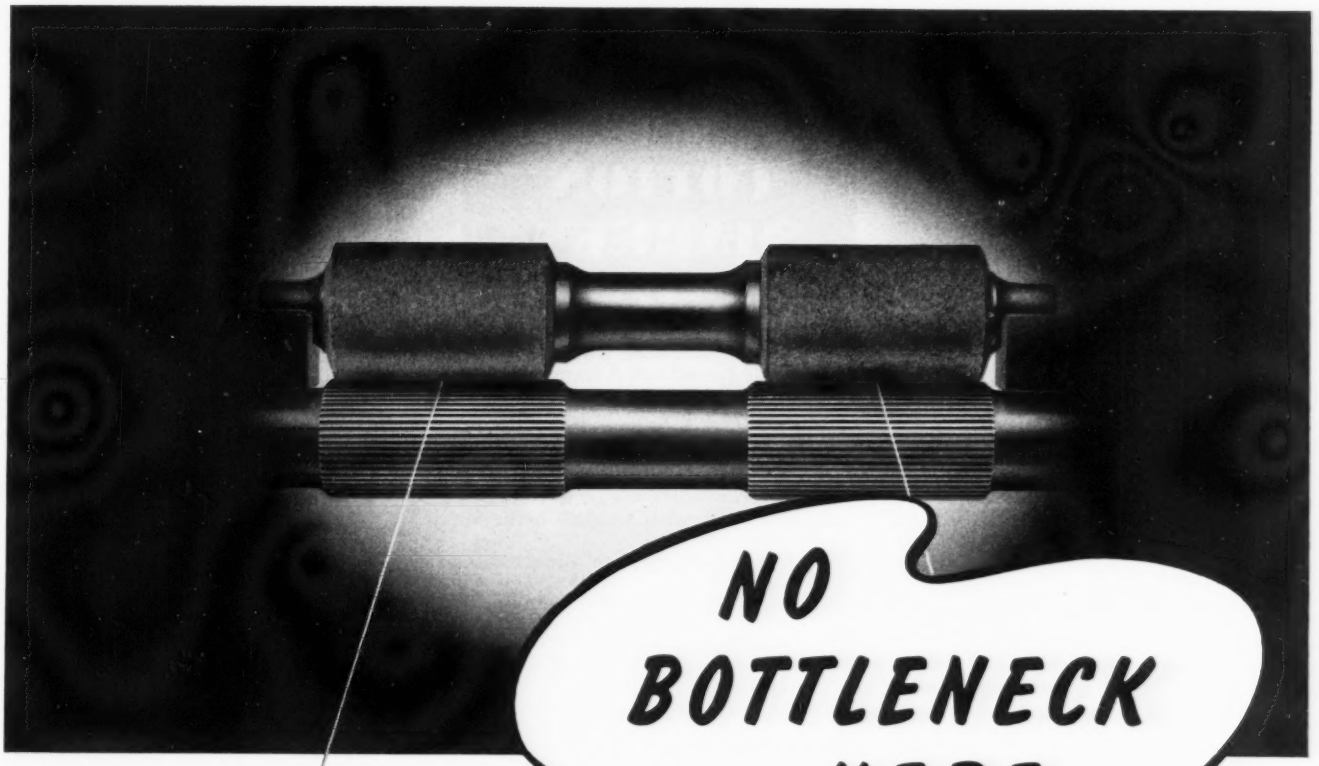
Trends in Fiber Use in U. S. A.

The story of the ups and downs in fiber consumption in the United States over approximately a half century has just been issued by the U. S. Department of Agriculture. The publication, "Trends in the Consumption of Fibers in the United States 1892-1939", by Robert B. Evans and Rose F. Monachino of the Southern Regional Research Laboratory of the Bureau of Agricultural Chemistry and Engineering, covers textile and cordage fibers, including cotton, wool and similar fibers, silk, rayon, flax, jute, the various hard fibers and hemp. A limited supply of this publication is available from the Bureau at Washington, D. C., or from the Laboratory at New Orleans, La.

The report, with a 50-page statistical appendix, considers trends from the standpoints of both mill consumption of raw fibers and the final consumption of fiber products by ultimate consumers. It shows that in each decade since 1900 cotton has averaged 70 to 72 per cent of all raw fibers consumed by mills in the United States. In comparison wool made up 8 to 9 per cent; hard fibers, 9 to 14 per cent; jute 3 to 8 per cent; silk, 2 per cent or less; and flax and hemp, less than one per cent. Consumption of rayon increased from less than one per cent of the total prior to 1924 to 9 per cent in 1939.

Mill consumption of fibers increased from 1892 until the period of the first World War, but afterward the trend was level or only slightly upward. The mill consumption of cotton followed about the same trend as the total consumption of all fibers, but consumption has fluctuated considerably in recent years. About 7.6 million bales were consumed by mills in both 1937 and 1939, more than in any previous calendar year; but in 1932 mills used only 5.2 million bales, the lowest figure for any year since 1912.

Total consumption of all fibers by ultimate consumers increased more rapidly than the population from 1892 to 1916, but has not increased so rapidly since then. Per capita consumption was at its peak in the World War period. The total of all fibers used per person averaged only 40.9 pounds a year during 1935 to 1939. It was 45 pounds during 1915 to 1919 and 41.7 pounds during 1905 to 1914.



THE MILLS ON CORK GET MAXIMUM PRODUCTION

PRODUCTION is the watchword in textile mills today. And the mills that are turning work out fastest and with the greatest efficiency are the mills spinning on Armstrong's Seamless Cork Cots.

The unique physical properties of CORK enable mills using these cots to produce better running work and reduce delays for roll covering replacements. These important properties are: high coefficient of friction, resilience, resistance to lateral flow, resistance to oil, water, and dyes, and extreme durability. Proof of CORK'S acceptance as the number one roll covering is the fact that more than 8,500,000 spindles are now running on Armstrong's Seamless Cork Cots.

In the interest of still greater production efficiency, Armstrong offers the services of sales, research, and engineering departments to help you with any production problem. See your Armstrong representative or write Armstrong Cork Company, Textile Products Section, 923 Arch St., Lancaster, Pa.

Armstrong's Seamless Cork Cots

CORK PRODUCTS SINCE 1860

New Orleans, August 16, 1941

COMMENT on the COTTON MARKET

COTTON ADVANCED steadily during the second half of July until quotations reached the highest point recorded since early in 1930. At the highest point October sold at 17.52 in New Orleans and at 17.46 in New York. These prices represented a gain of 160 points, or $8.00 a bale for the two weeks and an advance of 800 points, or $40.00 a bale since the upward movement started in the latter part of February.

The upward movement was checked around the first of August by the President's message to Congress asking for broad price fixing authority. His message was followed by intimations from high Governmental officials that the Administration was considering plans for release of Government-owned cotton in order to relieve tight spot conditions. Orders of the OPACS fixing ceilings on cotton yarn and on goods manufactured from cotton also proved unsettling. These developments precipitated enough liquidation to cause a drop of 150 points in values in a short period of time.

Since this check to the rising trend of prices occurred the market has been irregular with frequent ups and downs. On one of these reactions values were 200 points under the season's high. Later the market rallied about 75 points but failed to hold all of the recovery.

Practically all declines were caused by bearish statements of one kind or another from high Government officials, including the Secretary of Agriculture, the Secretary of the Treasury and the head of the OPACS. The Secretary of Agriculture, in a public address, strongly opposed Senator Smith's bill to freeze Government-owned and controlled stocks and was quoted as predicting that the bill would be vetoed, if passed. The head of the OPACS presented Congress with a price fixing bill which would have given him almost autocratic power to fix prices on agricultural as well as other commodities. Congressional leaders are reported to have refused to accept his bill as written and either persuaded or forced him to modify it. The modified bill provides that the ceiling on agricultural products cannot be less than 110 per cent of parity. This would be about 18.34 cents a pound for Middling 15/16 on the farm.

Nearly all advances which occurred during this period came from the progress of legislation through Congress to freeze Government-owned and controlled stocks. The final enactment of this bill on the 13th caused a sharp upturn. This advance, however, failed to hold due to predictions of a veto. The President has until Aug. 27 to accept or veto this bill.

Another good advance occurred on publication of a report that the Department of Agriculture is planning to ask Congress to re-write the Agricultural Adjustment Act so as to give the Secretary of Agriculture authority to exchange, or barter, our surplus agricultural products for non-competitive foreign commodities in order to increase exports of cotton and other products, and to reduce production of our cotton progressively to 10,000,000 bales by 1945. In the event these powers are voted, the Administration is reported willing for Congress to extend the 85 per cent of parity loans through 1944. The present parity for cotton is 16.49 for Middling 7/8-inch on the farm. Farm Bloc leaders are expected to ask Congress for a new parity formula which would raise the parity of cotton to 20½ cents a pound for Middling 7/8-inch on the farm. Twenty points should be added to obtain the value of Middling 15/16, the basic grade of futures. This bill is not expected to come up in Congress until about the middle of September when Congress reassembles after a vacation. Members of the House Banking Committee have also voted to postpone hearings on Leon Henderson's price bill until after its vacation. This indicates that passage of the price fixing bill is a long ways off even if it is ever passed. If it is passed the ceiling for cotton is expected to be raised from 110 per cent of parity to 120 per cent.

We have had an irregular market for some time as a result of the above outlined conflicting developments and prices as this is written are 140 to 150 points under the season's highs, indications are that the uncertainty over the President's attitude towards the bill to freeze cotton and wheat stocks will be a market factor of considerable importance until he either vetoes or accepts it.

There was some disappointment at the parity and loan rates on account of agitation in Congress for high figures for both. The Department of Agriculture fixed the parity at 16.49 for Middling 7/8-inch on the farm and made the average loan rate 14.02 for Middling 7/8-inch on the farm. The first official crop estimate was for 10,817,000 bales of 500 pounds gross weight. The Crop Reporting Board says weevil infestation is widespread and expects damage from these pests to be double the average of the past ten years. This would amount to 16.2 per cent of a full yield. No estimate was given as to the probable damage from weather and other causes. This loss is usually considerably in excess of that caused by weevil.

The Bureau gives mill stocks as 1,-consumption for the season of 1940-41 as 9,718,000 bales, the largest in the history of the cotton trade. Exports were only 1,083,000, the smallest since the Civil War. Consumption during recent months has been running at the rate of 10,700,000 bales for 12 months.

The Bureau gives mill stocks as 1,-874,000 and warehouse stocks as 9,704,-000. Warehouse stocks includes 6,100,-000 bales owned by the Commodity Credit Corporation and about 550,000 bales of loan stocks, half of which may eventually be taken over by the Commodity Credit Corporation. The Commodity Credit Corporation states that all loan cotton not withdrawn by October 1 will be put into a pool to be sold for benefit of the farmer but that none will be sold prior to March 1, 1942. Loan stocks on August 9 were given as 459,000 bales.

The Census Bureau has not yet published its figures on the carry-over of cotton in this country. The above statement, however, indicates a carry-over of "Free" cotton in this country of not over 3,800,000 bales owned partly by merchants and partly by farmers. This is exclusive of mill stocks. The carry-over of our cotton abroad is estimated about 800,000 bales.

We do not believe the crop will exceed 10,000,000 running bales. If we add this figure to the known "Free" stocks we have a probable available supply of 13,800,000 running bales. Officials of the Commodity Credit Corporation have given public assurance that they will not sell any of its stocks during the marketing of this crop, regardless of whether or not the Smith Freezing bill becomes a law.

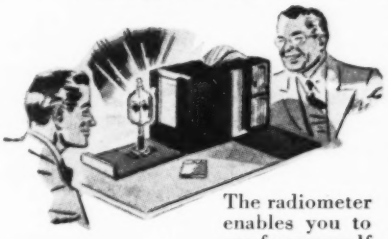
On the other hand, domestic mill and export demand is expected to total at least 12,000,000 bales. These figures point to very tight conditions in spots even if the farmer sells every bale of his crop. Past records demonstrate clearly that the farmer always withholds a fairly large portion of his crop when prices are high. The ease with which the farmer can obtain comparatively high loans from the Government points to the probability that large

CENSUS REPORT OF COTTON CONSUMED AND STOCKS

Consumption of Lint— Bales—	This Season	Last Season
In United States, July	928,943	622,723
In United States, June	875,137	565,416
In United States 12 months	9,718,220	7,783,774
In Cotton Growing States, July	791,824	535,002
In Cotton Growing States 12 months	8,280,340	6,646,532
In New England States, July	110,080	70,592
In New England States 12 months	1,147,090	918,313
In All Other States, July	27,039	17,129
In All Other States, 12 months	290,790	218,929
Mill Stocks		
In United States, July 31	1,874,187	972,353
In United States, June 30	1,918,335	1,160,912
In Cotton Growing States, July 31	1,471,018	742,178
In New England States, July 31	342,555	186,311
In All Other States	60,614	43,864
Warehouse Stocks		
In United States, July 31	9,704,095	9,121,817
In United States, June 30	10,570,235	9,576,683
In Cotton Growing States, July 31	9,300,041	9,044,387
In New England States, July 31	377,101	69,661
In All Other States, July 31	26,953	7,769
Active Cotton Spindles		
In United States, July	23,027,818	21,919,000
In United States, June	22,991,546	21,954,616
In Cotton Growing States, July	17,381,470	16,732,756
In New England States, July	5,012,194	4,581,762
In All Other States, July	634,154	604,482
Exports for July	32,718	136,751
Exports for 12 months	1,083,505	6,191,712

SEEING *is Believing!*

This Test Shows How to Reduce Eyestrain and Fatigue — Increase Efficiency and Production



The radiometer enables you to see for yourself how AKLO Glass reduces glare and absorbs heat — steps up production.

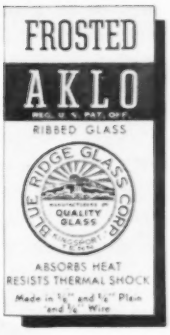
Control of light, heat and humidity, in Southern Textile Mills, can be improved economically with the right kind of glass in windows and skylights.

The radiometer test illustrated above proves how Frosted AKLO heat absorbing glass controls glare and admits only soft, diffused daylight. Temperatures are made comfortable and humidity is kept more uniform without the use of expensive construction and maintenance.

Mill operators find by installing Blue Ridge AKLO Glass, higher productivity can be maintained because glare fatigue is reduced, hand and eye-coordination speeded, and errors and accidents are kept at a minimum.

A wide range of Blue Ridge Glass is available, made in the south for Southern industrial plants. For assistance in solving the various conditions of your operations, write Blue Ridge Sales Division, Dept. CO941, Libbey·Owens·Ford Glass Company, Toledo, Ohio.

By absorbing 97½% of the infra-red (heat) rays, Frosted AKLO reduces by as much as 48% the solar heat entering through windows, skylights and transoms.



Write today for your copy of the Blue Ridge AKLO catalog. It is yours for the asking.

BLUE RIDGE AKLO GLASS

FIGURED AND WIRE GLASS THAT ABSORBS SOLAR HEAT AND REDUCES GLARE

amounts of the new crop will go into the loan. Many farmers who put their 1940 crop into the loan sold their certificates for as much as $25.00 to $30.00 a bale.

In the event that the early movement into the loan is large we are apt to see another substantial advance in prices regardless of the effect of the early hedges or the President's action on the freezing bill. The market has not always declined during the hedging period. Some of the biggest "bull" movements of the past started during the heavy marketing and hedging period.

Second Quarter Rayon Yarn Production

Production of rayon filament yarn in the United States during the second quarter of 1941 amounted to 112,000,000 pounds according to figures compiled by the *Rayon Organon*, published by the Textile Economics Bureau, Inc. The total established a new high record and exceeded by 5 per cent the previous quarterly record of 106,200,000 pounds produced in the first quarter of 1941. In the second quarter of 1940, output totaled 97,500,000 pounds.

During the second quarter of 1941 record production levels were made in both the viscose-cupra and the acetate divisions of the yarn industry. But even at these production levels, the demand for rayon continued to exceed the supply. An increase in the average denier of rayon yarn spun was one of the factors responsible for the higher level of production.

Rayon staple fiber "available for consumption" in the second quarter of 1941 totaled 31,600,000 pounds, composed of 26,600,000 pounds of domestic production and 5,000,000 pounds of imports for consumption. This second quarter total was the largest on record, exceeding the first quarter figure of 30,700,000 pounds by 3 per cent. Imports of staple fiber for the remainder of 1941, however, are expected to be at a very low level.

Domestic production of staple fiber in June was at the approximate rate of 10,000,000 pounds, and it is estimated by the Bureau that this monthly rate will increase to approximately 11,500,000 pounds in the autumn when present contemplated capacity comes into operation.

July shipments of rayon filament yarn to domestic consumers amounted to 39,400,000 pounds compared with the 38,300,000 pounds in June and 32,100,000 pounds in July 1940. For the first seven months of 1941, rayon yarn shipments have totaled 258,600,000 pounds as compared with 218,300,000 pounds in the corresponding period in 1940, an increase of 18 per cent. Stocks of rayon filament yarn in the hands of producers totaled only 3,600,000 pounds at the end of July as against 4,600,000 pounds held on June 30 this year.

What the Southern Mills Are Doing

R. D. Sanders, Jackson, Miss., has purchased the buildings and property of the McComb (Miss.) Cotton Mill, formerly owned by the Crescent Corporation of Mississippi. According to reports, about 600 persons are expected to be employed in the mill, which has government contracts, as soon as more machinery can be installed and other arrangements completed. Some of the former machinery is still in the mill building.

Mills Mill, Greenville, S. C., completed the early part of August modernization operations performed under a certificate of necessity for defense work at a cost of approximately $369,000. The work consisted chiefly of replacement of old machinery with equipment that would enable the mill to produce higher quality goods.

Dover Mill, Shelby, N. C., will build an addition which will add 22,000 square feet of floor space. The addition will cost about $50,000 and will permit more efficient arrangement of machinery, and will also make room for 50 or 60 additional looms.

Quaker Meadow Mills, Inc., Hildebran, N. C., is a recently-organized concern that is constructing a new building to house a yarn and cordage plant. Authorized capital is $600,000 with $30,000 subscribed. Bascom B. Blackwelder is president and treasurer.

Otto Feil, Atlanta, Ga., has purchased the plant, equipment and mill village of the Sunset Plant of California Cotton Mills at Selma, Ala. No announcement has been made regarding use of the property.

It is reported that a part of the Oneida Mills property at Graham, N. C., idle for several years, has been sold to Burlington Mills Corporation. Plans for use of the property has not been announced.

Perfection Mills, Weldon, N. C., closed for several years, are reported to begin operations soon. Approximately 100 workers will be employed when the mill is in full-time operation.

Riverdale Mills, Enoree, S. C., has closed the company store and is converting the building into a community center and gymnasium. The employees' golf course is also being improved.

Grantville (Ga.) Mills have let contract for new warehouse and opener room, costing nearly $28,000. Robert & Company, Atlanta, Ga., prepared the plans.

Trenton Cotton Mills of Gastonia, N. C., and A. M. Smyre Manufacturing Company, Ranlo, N. C., are installing new Saco-Lowell combers to replace old-style machines.

Appleton Company, Anderson, S. C., has added a cloth room extension 60x130 feet, two stories, and a cloth storage building has been built as a separate one-story unit 60x150 feet.

Eagle & Phonix Mills, Columbus, Ga., has contracted for a four-story addition and alterations to the present plant as part of a program of modernization and extension for defense.

Knitting

Atlas Knitting Mills, South Pittsburg, Tenn., have been re-opened under the name of Sequatchie Valley Hosiery Mills. The plant will specialize in half-hose and men's slacks. It is planned later to include the manufacture of children's anklets.

Southland Hosiery Mills, Inc., Greensboro, N. C., has been granted certificate of incorporation with authorized capital stock of $100,000. Incorporators are F. K. Wilkins, Theodore Samet and Harry Rockwell, all of Greensboro.

Cheraw (S. C.) Knitting Mills has been granted a charter to manufacture silk hosiery and other products. Capital stock is $20,000. Officers are Harry A. Kelley, president, and James J. O'Connor, secretary-treasurer.

Boyertown (Pa.) Hosiery Company, a new organization, has leased the former Calvin Rhoads building and is installing knitting machinery.

THE SHOP FOREMAN

Who is the man who doesn't toil,
Yet gets as touchy as a boil?
Who is this guy who knows his oil?
The Shop Foreman

Who listens to the chisel's song.
Who has to smile when told he's wrong?
Who has to hurry all day long?
The Shop Foreman

Who strives to please with all his might,
Who sees that everything is right,
And who is last to leave at night?
The Shop Foreman

Who has to get the change for ten;
Who knows just why or what or when?
Who gets more hell than forty men?
The Shop Foreman

Who hasn't time to stall or smoke,
Who has to laugh at every joke,
Then gets a foolish little poke?
The Shop Foreman

What bird gets called from out his bed,
To hear you say, "My engine's dead",
Who wishes it were you instead?
The Shop Foreman.

Sweeter at the point of Sale

DU PONT
AVITEX
REG. U.S. PAT. OFF.
TEXTILE FINISHING AGENTS

"Avitex" finishing agents keep whites white, colors bright, fabrics smelling sweet and fresh—right down to the point of retail sale. No rancidity. No yellowing. And no mark-downs because of these handicaps. These are specific facts that help you sell quality finishing — when you use "Avitex." ¶ The family of "Avitex" finishes meet every need—add merchandising appeal, but cost no more than other quality finishes. Write or call to discuss how "Avitex" can step up your finishing and your sales story.

E. I. DU PONT DE NEMOURS & CO. (INC.), FINE CHEMICALS DIV. WILMINGTON, DELAWARE

TIMELY NEWS ITEMS with a TEXTILE SLANT

Leo Lenk has been appointed sales agent in Mexico for all products of the Emmons Loom Harness Company, Lawrence, Mass. Mr. Lenk, who already represents a number of United States manufacturers, is located at Apartado 533, Mexico, D.F.

Solvay Process Company, manufacturer of alkalies and nitrogen products, has established a separate product development section with W. E. Blair and D. H. Ross as manager and assistant manager respectively. Headquarters are at 40 Rector St., New York City. Their work will involve close co-operation with the research and technical sales groups, with a view to broadening the scope of Solvay's service to its customers.

William H. Smith, former superintendent of Firth Carpet Company, has been appointed supervisor of the woolen and worsted section of the textile unit, research plant of American Viscose Corporation, Marcus Hook, Pa. Other appointments are Walter W. Ingenthron, Jr., overseer of worsted combing, drawing, and spinning; and John T. Drennan, overseer of preparing, blending, picking and carding for woolen and worsted sections. Both men are experienced graduates of Philadelphia Textile School.

Albert R. Breen, with headquarters at 80 East Jackson Boulevard, Chicago, Ill., again represents the Emmons Loom Harness Company, Lawrence, Mass., in the Mid-West.

United States Institute for Textile Research has moved its offices from 65 Franklin St., Boston, to 10 East 40th St., Room 3701, New York City. A branch office of the Institute will be located with The Textile Foundation in Washington, D. C., whose offices are now located in Room 225, Industrial Building, National Bureau of Standards, Washington, D. C. A branch office of the Foundation will also be maintained at the New York City address of the Institute.

George M. Porges has announced his resignation as vice-president and director of the Kaumagraph Company, Wilmington, Del., manufacturers of dry transfers, lithography, etc. Mr. Porges has been with the company for more than 20 years, and for the past 15 years had directed its sales and advertising activities. No definite plans for the immediate future have been announced; he has established a temporary office at 271 Church St., New York City.

Aridye Corporation, Fair Lawn, N. J., has begun a plant expansion in Rock Hill, S. C., the expansion being necessitated by the growing use of the company's process for printing and padding. Some manufacturing operations are contemplated in Rock Hill after completion of the addition.

George B. Ewing, Jr., has joined the staff of sales engineers in the Houston office of The Foxboro Company, Foxboro, Mass. E. B. Miller has been appointed manager in charge of company's sales and service in the St. Louis, Mo., territory of the company, succeeding E. R. Huckman, who has been transferred to the New York territory.

E. H. Jacobs Manufacturing Company, Inc., Danielson, Conn., has announced the expansion of the company by the purchase of 16 acres of land just outside the city limits of Charlotte, N. C. Two one-story buildings, each of 10,000 square feet, will be erected.

Tesco Chemical Company, P. O. Box 4748, Atlanta, Ga., is the new name of that part of the company formerly known as Chemical Division of International Agricultural Corporation. T. E. Schneider is president of the new company, which will manufacture and handle a line of chemicals, soaps and alkalies. The former selling staff of I.A.C. has been retained to cover the textile industry.

Sjostrom Machine Company, Lawrence, Mass., has increased the manufacturing facilities and office space. The company makes conditioning machines, towel machines and Knotwood feeder aprons.

Grinnell Company, Atlanta, Ga., has announced the following changes in the organization. Harry A. Keene has been made assistant sales manager in charge of branch operations and sales promotion and publicity; George W. Day, formerly St. Louis manager, has been made assistant sales manager in charge of supply sales and special contact; A. Burt Donkersley holds the same position in charge of industrial piping engineering. Sam Thompson has been moved from Atlanta to New Orleans and will have charge of sprinkler sales.

New Textile Publications

Timken Roller Bearing Company, Canton, Ohio. Table showing ingenious scheduling arrangement of shifts and crews so that plant does not ever have to shut down. Each crew works five extra shifts over each 20-week period. Every man works five days in a row and then is off at least 48 hours, after which he changes shifts. Over each 20-week period each man has five Sundays off.

Open Steel Flooring Institute, American Bank Building, Pittsburgh, Pa. "New Ideas in Functional Floor Design", a 16-page handbook on the many uses of open steel floor grating. Includes table of safe loads based on government specifications.

Crane Company, 836 South Michigan Ave., Chicago, Ill. Literature on piping pointers to keep equipment on the job.

Brown Instrument Company, Wayne and Roberts Avenues, Philadelphia, Pa. Catalog No. 8903 on the company's air-operated controllers for temperature, pressure, flow, liquid level and humidity.

Colgate-Palmolive-Peet Company, 105 Hudson St., Jersey City, N. J. "Soap Buying Guide", a complete catalog of soaps and detergents covering the line of products from toilet soaps to heavy-duty soap products for processing and laundering.

Alabama Polytechnic Institute, Auburn, Ala. "Sweet Potato Starch as a Sizing Agent in the Textile Industry", by Omar C. Moore. Engineering Bulletin No. 11 by the Engineering Experiment Station.

Propellair, Inc., Springfield, Ohio. Catalog illustrating types and applications of airfoil propeller axial flow fans and ventilating equipment.

Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. New folder describing integral gear units for generators, compressors, pumps, lineshafts and other equipment to be driven slower than efficient turbine speeds. Folder F-8603.

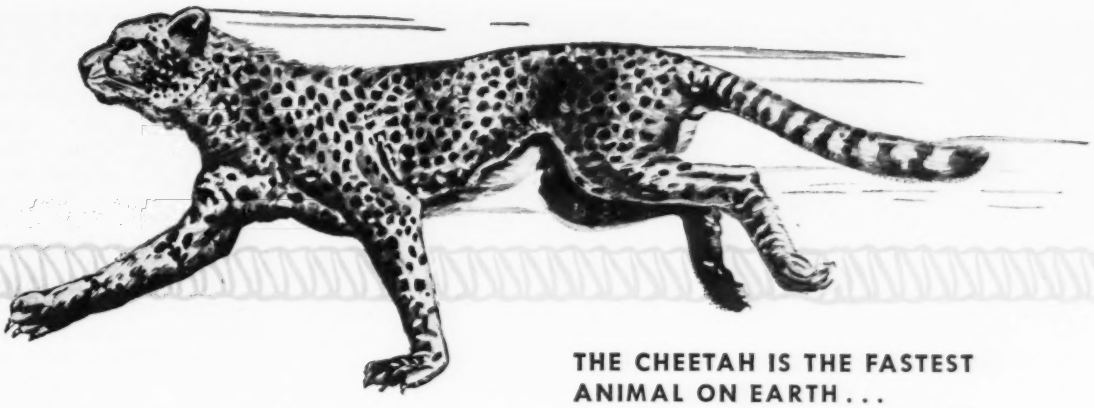
Catalog section 26-200, describing a constant potential dc. welding system for supplying welding energy to multiple arc circuits. Order all publications from Dept. 7-N-20.

Burkart-Schier Chemical Co., Chattanooga, Tenn. Literature descriptive of Solventol, a concentrated soluble solvent compound for the removal of grease and oil stains from chenille and tufted fabrics. No rubbing is necessary.

Pepperell Mfg. Co., 160 State St., Boston, Mass. "Functions of a Testing Laboratory in a Textile Mill", by H. D. Evans (in charge of laboratory of Biddeford, Me., division of company).

Department of Commerce, Washington, D. C. "How to Sell to the Government for Civilian Needs", a pamphlet designed to supply information concerning procedures employed by various government agencies in making routine purchases of merchandise for civilian needs.

B. F. Goodrich Co., Akron, Ohio. 12-page catalog section on Vibro-insulators, devices of metal and rubber to alleviate vibration and noise in machinery.



THE CHEETAH IS THE FASTEST ANIMAL ON EARTH . . .

It is a hunting leopard that has been clocked in test races at 70 miles an hour for 100 yards.

THE WILLCOX AND GIBBS "SUPERLOCK" IS THE FASTEST OVERSEAMING MACHINE IN THE WORLD

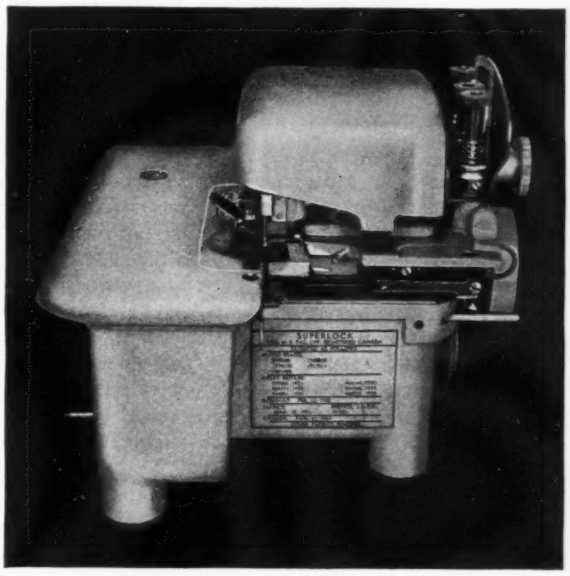
Reg. U. S. Pat. Off.

Like the Cheetah, the "Superlock" develops its great speed through smooth design, silent and perfectly balanced motion, which makes possible instantaneous acceleration with virtual absence of vibration even at maximum speed.

Continuous operation up to 6000 R. P. M. over long periods is possible without causing fatigue to the operator.

The "Superlock" represents the most advanced development of the sewing machine industry in recent years. It is superior for overseaming and edging work on a wide variety of fabrics.

Whether overseaming, overedging, hemming or serging, the "Superlock" establishes new standards of efficiency and lowered costs while maintaining the highest quality of production.



There is a "Superlock" machine best fitted to your particular requirements. Let us demonstrate its possibilities on your own work in your own plant. No obligation.

Genuine Willcox and Gibbs and Metropolitan parts and needles may be purchased only from Company offices and authorized agents.

Send for illustrated descriptive Bulletin No. 828

WILLCOX & GIBBS SEWING MACHINE CO.

214 West 39th Street • New York, N. Y.

NEW EQUIPMENT and MATERIALS

Triton 720

Rohm & Haas Company, Philadelphia, Pa., has announced a new synthetic detergent called Triton 720, which is described as an aqueous paste of a sulfonated ether salt. It is said to produce results not obtainable with other detergents. A typical case cited is that a combination of one per cent Triton 720 and ½ per cent ammonium bifluoride removed greasy iron spots from a white rayon fabric that could not be cleaned in any other way. It is said to eliminate scouring or kier boiling of certain rayon and cotton fabrics. It may be applied in the desizing bath or padded on separately, thus eliminating the intermediate scouring process.

◆

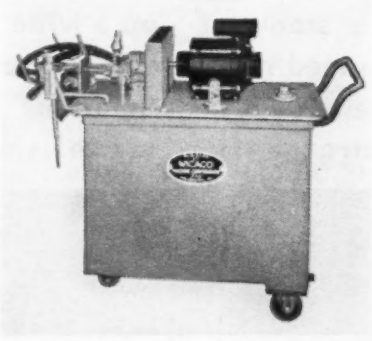
Water Control for Multiple Boilers

Johnson Corporation, Three Rivers, Mich., has announced a new system of multiple boiler water control that maintains safe and proper water levels in two or more boilers with just one boiler feed pump. Each boiler water level is controlled separately, and water is added independently of the other boilers as the need arises. The system is electrically controlled, completely automatic in operation. Construction is simple, insuring dependable operation and making installation easy. The new control is a variant of the company's former control which has been in operation for several years. There are said to be no moving parts in the stationary electrodes which can jam or clog or become inoperative because of scale accumulation. The control is suitable for pressures up to 150 pounds, for all boilers up to 250 hp. It can be used with any type of steam or motor driven boiler feed pump, and can also be arranged with a duplicate stand-by or emergency pumping unit.

◆

Time-Saving Machine to Drain and Fill Bolsters

Wicaco Machine Corporation, Wayne Junction, Philadelphia, Pa., has designed a unique portable-type machine on wheels which drains and refills spinning and twister frame bolsters in one operation, thereby saving time and



labor. Oil from the bolsters passes through a magnetic filter where it is renewed and all ferrous material removed and can be used again. The gun for oiling is so designed that when the grip is squeezed, the old oil in the bolster is drawn out of the base and fresh oil is put in. It is said to be impossible to over-fill the bolster with oil with the pressure arrangement on the gun, and the gun always supplies the proper level of oil. The tank of the machine is supplied with a gauge for oil-level reading. It is estimated that it requires only 15 seconds per spindle for removing old oil and replacing with new oil on average size spindles. It requires a connection to the lighting circuit.

◆

Uniform Tension Unwinders

Johnstone Engineering & Machine Company, Downingtown, Pa., have designed a new uniform tension unwinder with auto-hydraulic brakes, which is said to give a positive means for assuring continuous uniform tension on a web of material being unwound from a parent roll. Since the speed and diameter of the unwinding roll affects the tension of the web, the machine has a super-sensitive, pull-balancing automaton while running and also while slowing down or stopping the machine, or while making jogging starts. The hydraulic brake is said to be new on unwinding machines.

◆

Circuit Interrupter for Hazardous Locations

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., has made available a new circuit interrupter for hazardous locations. It is for use for disconnecting or interrupting ac. or dc. circuits in Class I Group D locations where atmospheres contain gasoline alcohols, natural gas and other explosive vapors. Manually operated, the De-ion circuit interrupter is furnished with a NEMA Type 7 cast enclosure finished in aluminum with closely ground fit between box and cover. Contact burning is reduced to a minimum by De-ion arc quenchers which divide and extinguish arcs almost instantly.

◆

Sterilamp, A Means of Sanitation

United States Testing Company, Inc., 1415 Park Ave., Hoboken, N. J., has released information pertaining to the Sterilamp, a device manufactured by Westinghouse to assist in protecting materials at the time of manufacture and storage by preventing foreign growths, such as mold and mildew, through the employment of ultra-violet radiation. United States Testing Company has worked out experimental installations of ultra-violet light equipment for the control of mildew and bacteria in soaking, dyeing, finishing and packaging of various textiles, including hosiery and knit goods, and will supervise the installation of Sterilamp fixtures by regular plant electricians to make certain that units are placed for proper radiation and maximum kill of mildew and bacteria.

◆

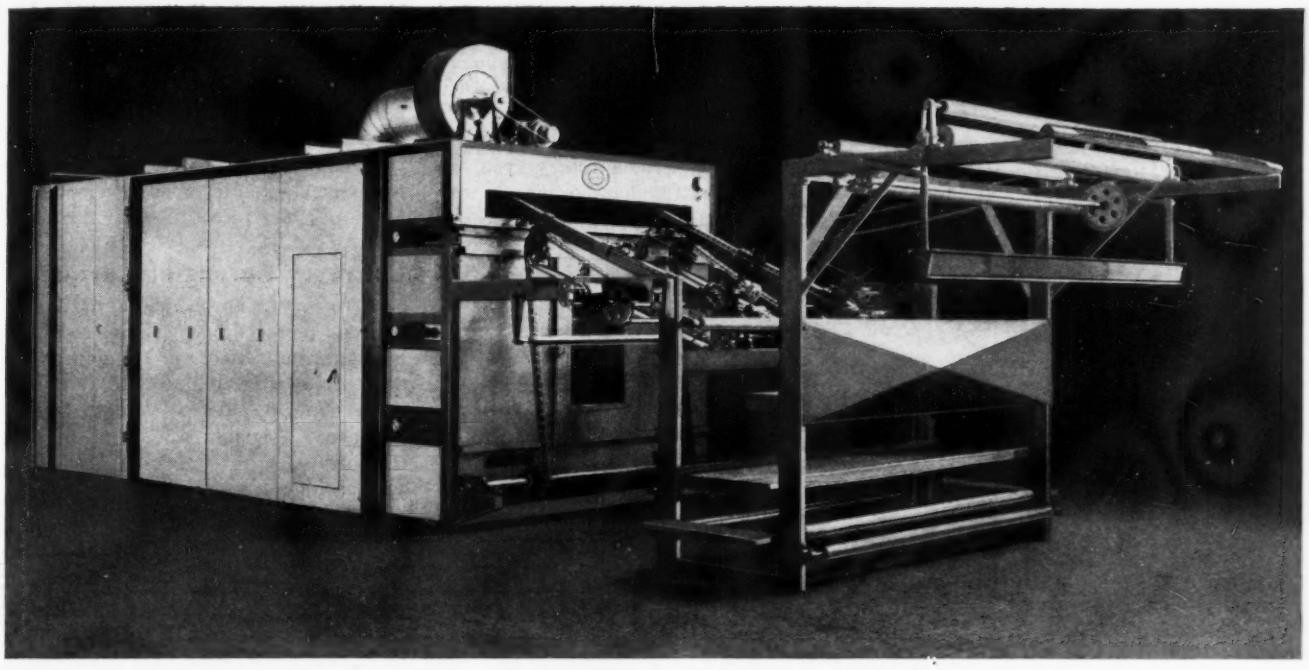
New Series of Rotary Pumps

Blackmer Pump Company, Grand Rapids, Mich., has announced a complete new series of rotary pumps. The general specifications of the new series are capacities from 50 to 700 g.p.m., pressures up to 150 pounds, and with standard units being furnished in reduction gear drive, gearhead motor and V-belt drive. Standard constructions are of all-iron, bronze-fitted or all-bronze. Internal roller bearings are furnished on pumps for lubricating liquids and external roller bearings are furnished on pumps for handling non-lubricating liquids. The external roller bearings pumps are equipped with mechanical seals, thereby eliminating

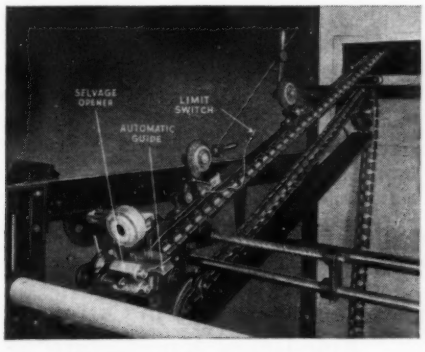
Correction

In the item on page 82 of the August issue of COTTON, describing the new midget welder of Westinghouse Electric & Manufacturing Co., the above cut illustrating the machine appeared upside down, due to a printers' error after proof had been released.

We are glad to reproduce the illustration here, in its proper position.



HOW TO TENTER CLOTH AT HIGH SPEEDS AND LOWER COSTS FOR LABOR, STEAM, AND POWER, AND IN MINIMUM FLOOR SPACE



The cut shown above illustrates Automatic Guider, Patented Hunter Selvedge Opener, and Double Brush mounted on entering rail of Dryer. Illustration shows units mounted on left rail only, but they are furnished on both entering rails. Limit switch to stop Dryer if cloth fails to engage pins is shown by arrow. Limit switch furnished on both entering rails.

New Hunter Uniflow Dries . . .

14-OUNCE WORSTEDS AT 25 YARDS PER MINUTE
16-OUNCE WOOLENS AT 26 YARDS PER MINUTE
IN 12 LINEAL FEET FOR THE DRYING CHAMBER

THE HUNTER UNIFLOW is a new and different cloth tenter. It affords an entirely new conception of air drying cloth with new handle at high speeds. For example: drying time is reduced 1.2 to 4 minutes. Your cloth is exposed to heat and air but a fraction of the time usually required.

The new Uniflow is all metal and requires only one man's operation. It comes complete with automatic guides, selvedge openers, temperature and humidity controls or indicators, recording devices, counters, remote control, tachometer, etc.

Write for production details of installations in outstanding mills.

JAMES HUNTER MACHINE CO. Hunter NORTH ADAMS MASS.

JAMES HUNTER MACHINE COMPANY

FOUNDED 1847 • NORTH ADAMS, MASSACHUSETTS

Western Representative: **E. G. PAULES, 343 Bendix Bldg., Los Angeles, Calif.**

stuffing boxes. The new pumps have a wide field of industrial application, especially in connection with hydraulically-operated machinery.

◆

Air Circuit Breaker; New Tachometer

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., has announced two products that are of interest to the textile industry. A new and compact circuit breaker designed especially for use in industrial, central station or power plants where operation under repetitive duty cycles is required, is available. The new type DK breaker is available in 15,000 and 25,000 ampere interrupting capacities in all standard current ratings from 15 to 600 amperes for operation on one, two, three, or four-pole 600 volts ac. or 250 volts dc. circuits. The breaker is equipped with a rotary type, removable operating handle for controlling it manually. In addition, electric operation can be provided by a motor mechanism and a shunt trip. The breakers are available in four different forms; an open-type and three forms for enclosed application.

A new alternating current tachometer for use in measuring revolutions per minute, feet per hour, or gallons per minute in any manufacturing plant where rotating equipment is used is also available. It is known as type A-80 and consists of an alternating current generator and a voltmeter of the rectifier type. The tachometer is recommended for operation over a range of from zero to 5,000 r.p.m.

◆

Conveyor Aprons of Lucite

A conveyor apron made of Lucite methyl methacrylate resin rods, replacing metal tubes, is being used on the textile conditioning machines now being made by Kearny Manufacturing Company, Kearny, N. J. It is said that the substitute material for metal releases much needed brass for defense and other vital industries.

◆

Traveling Batch Scale Car

Cleveland TramRail Division of Cleveland Crane and Engineering Company, Wickliffe, Ohio, has developed a traveling batch scale car said to be particularly suited for the handling of batch materials entering into the manufacture of such products as are made from rubber, chemicals, etc. The car is motor driven and is controlled by an operator who rides on the platform space provided to the left of the bucket. A variable speed drum controller permits the car to be traveled at any speed up to 300 feet per minute. Double overhead rails make it possible to straddle overhead bins so that the chutes may be brought close to the car bucket. Scales on the car accurately weigh the ingredients as they are dumped in, and the bucket is easily emptied by tilting through use of a crank wheel.

◆

"Inventory Guides in Cotton Fine-Goods Manufacture"

"Inventory Guides in Cotton Fine-Goods Manufacture", by George W. Taylor, is the third booklet in the series on inventory policies in the textile industries, prepared by the Industrial Research Department, Wharton School of Finance and Commerce of the University of Pennsylvania, and published by The Textile Foundation, Washington, D. C. In discussing statistical guides for the management of inventories in the fine-goods industry, the report points out that low mill stocks are a danger signal because they customarily give rise to heavy forward buying, followed by advancing prices that often stimulate an expansion of output far beyond the ordinary needs of the market. The report not only deals with statistical guides but it also discusses the question of whether all fine-goods should be made strictly to order. Price 50 cents.

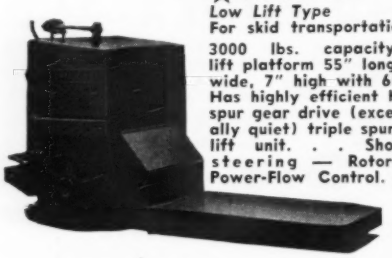
TRADE AUTOMATIC MARK

Manufacturers for Over Thirty Years

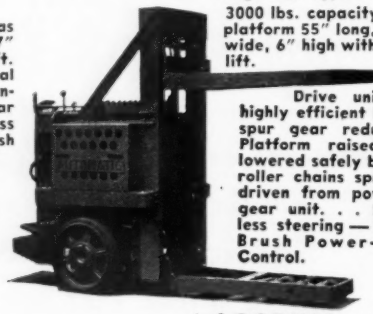
MODERN *Electric Propelled* INDUSTRIAL TRUCKS

FOR ECONOMICAL MATERIALS HANDLING IN THE TEXTILE INDUSTRY

★ LIFTING
Low Lift Type
For skid transportation
3000 lbs. capacity—has lift platform 55" long, 27" wide, 7" high with 6" lift. Has highly efficient helical spur gear drive (exceptionally quiet) triple spur gear lift unit. . . Shockless steering — Rotor-Brush Power-Flow Control.

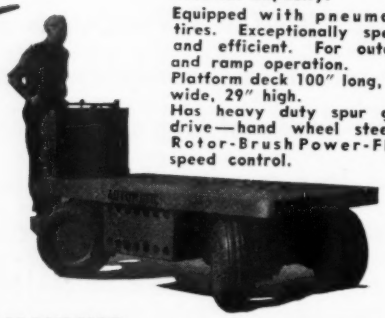


★ TIERING
High Lift Type
3000 lbs. capacity has platform 55" long, 26" wide, 6" high with 60" lift.
Drive unit has highly efficient helical spur gear reduction. Platform raised and lowered safely by two roller chains sprocket driven from powerful gear unit. . . Shockless steering — Rotor-Brush Power-Flow Control.



★ STACKING
Use your *full* vertical storage space—stack unit loads on pallets—eliminate re-handling—simplify inventory—speed up production—use the "AUTOMATIC" Fork Truck System.
Capacities 1000 and 2000 lbs.
Telescopic Lift 120" Uprights collapse to 83"
Truck is exceptionally compact, will maneuver easily in congested areas also lightweight for min. capacity elevators.
Get Full Details

★ LOADING
Platform Type
4000 lb. capacity.
Equipped with pneumatic tires. Exceptionally speedy and efficient. For outdoor and ramp operation.
Platform deck 100" long, 51" wide, 29" high.
Has heavy duty spur gear drive—hand wheel steer—Rotor-Brush Power-Flow speed control.



★ HAULING
For every hauling purpose. Tractor is exceptionally compact and powerful. Has 1000 lbs. Max. hauling D. B. P. Two wheel steer. Quiet drive. Rotor-Brush Power-Flow control.

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AUTOMATIC TRANSPORTATION CO.
Div. of the Yale & Towne Mfg. Co.
67 W. 87th St. CHICAGO, ILL.

Prevent "Seconds"

WEAVE ROOM use of leaking oil proves very costly because of damage to warps and woven goods.

By remaining in bearings, NON-FLUID OIL avoids this evil and effects large savings on oil and application cost.

7 out of 10 mills now use NON-FLUID OIL regularly. Tests proved it saved them money. IT WILL DO THE SAME FOR YOU!

Write today for free testing sample and bulletin, "Lubrication of Textile Machinery"

New York & New Jersey Lubricant Co.

Main Office: 292 Madison Ave., New York, N. Y.

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TRADE MARK REGISTERED
NON-FLUID OIL
IN U.S. PAT. OFFICE & FOREIGN COUNTRIES

MODERN TEXTILE LUBRICANT

Better Lubrication at Less Cost per Month

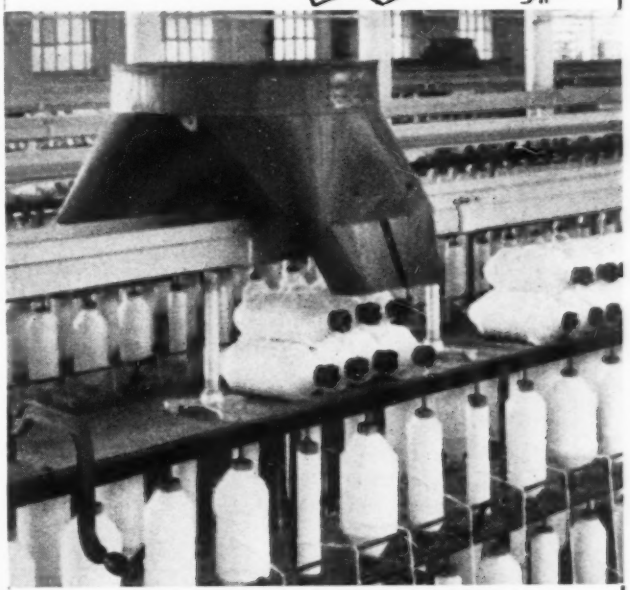
Spinner to Erector . .

"With those Traveling Cleaners all set up and running, it looks like we spinners will get a coupla more sides to tend."

Erector to Spinner . .

"Most likely. Often turns out that way. But look at that section of clean frames over there where we have got 'em running.

"Allowing for two more sides—instead of being harder wouldn't you figure the spinner's job looked easier?"



Parks-Cramer Company

Fitchburg, Mass. Boston, Mass. Charlotte, N. C.

PERSONAL NOTES
About Men You Know

E. O. STEINBACH has resigned as general manager of the Florence Mills, Forest City, N. C., to become executive vice-president and general manager of the Mayfair Mills, Arcadia, near Spartanburg, S. C. YATES SMITH, formerly secretary-treasurer of Gainesville (Ga.) Cotton Mills, has succeeded Mr. Steinbach at Forest City.

SMITH CROW, formerly general superintendent of Drayton Mills, Spartanburg, S. C., has become general superintendent of Mills No. 1 and No. 2 of Erlanger Cotton Mills Co., Lexington, N. C.

T. C. GILES, previously connected with Graniteville Co., Graniteville, S. C., has become superintendent of Exposition Cotton Mill No. 2, LaFayette, Ga., succeeding ARTHUR E. MASSEY, resigned.

JAMES M. GREEN has been made master mechanic at the Dunean Mills, Greenville, S. C., succeeding the late CHARLES CRENSHAW, who passed away suddenly the middle of July.

J. E. STONE, formerly assistant superintendent of the Aragon-Baldwin Mills, Rock Hill, S. C., has been promoted to superintendent, succeeding R. V. REVELS, retired.

W. C. BLAKENEY, formerly connected with the Springs Cotton Mills, Ft. Mill, S. C., has been made overseer of carding at the Spartan Mills, Spartanburg, S. C., of which JOHN M. CAUGHMAN is general superintendent.

GEORGE R. KAY, Greensboro, N. C., has become general superintendent of Spindale (N. C.) Mills, Inc.

G. W. MILLER, formerly shop foreman at Chicopee (Ga.) Manufacturing Corporation, has become master mechanic at Stonewall (Miss.) Cotton Mills, Inc.

ARTHUR T. MCELVEEN, formerly overseer of carding at Chicopee (Ga.) Manufacturing Corporation, has accepted a position as assistant superintendent of the Washington Manufacturing Company, Tennille, Ga.

W. P. RHODES, for some time sales manager for the Carolina Process Company, Mt. Holly, N. C., and more recently connected with the Rhodes-Rhyne Manufacturing Company, Lincolnton, N. C., has been elected secretary of the Rhodes Rhyne Manufacturing Company and Elizabeth's Indian Creek Cottons, also of Lincolnton, N. C.

W. EARL BATES, secretary of the Green River Mills, Inc., Tuxedo, N. C., since 1926, has accepted the position of secretary and assistant treasurer of Whitney (S. C.) Manufacturing Company. He is succeeded at the Green River Mills by DOUGLAS S. BLOIS, formerly associated with Southern Mercerizing Company, Tryon, N. C.

W. BEATY ARMSTRONG, formerly connected with the Stowe Mills, Inc., McAdenville, N. C., has become overseer of carding and spinning at the Deep River Manufacturing Company, Randleman, N. C.

R. D. HAYNES, formerly overseer of carding at Chadwick-Hoskins Company, Charlotte, N. C., now holds the same position with the Cumberland Plant of the Rockfish Mills, Cumberland, N. C. He succeeds C. K. QUICK, resigned. W. R. SHORES has resigned as superintendent of the Rockfish Mills, Hope Mills, N. C.

B. D. SNOW, formerly associated with Whittier Mills Co., Chattahoochee, Ga., has accepted the position of overseer of carding at Avondale Mills, Alexander City, Ala.

J. A. GORHAM has resigned as superintendent of Cherokee Mills, Acworth, Ga., and is succeeded by O. W. BRYANT.

W. R. WILLIAMS has become president and treasurer of the Sanford (N. C.) Cotton Mills, succeeding E. M. UNDERWOOD, SR., retired.

H. MORGAN ROGERS, formerly plant engineer of Muscogee Manufacturing Company, Columbus, Ga., has accepted the position of master mechanic at the new woolen plant of Excelsior Mills at Union, S. C.

RALPH DOUBERLY, formerly assistant plant engineer at the Muscogee Manufacturing Company, Columbus, Ga., has been promoted to the position of plant engineer succeeding Mr. Rogers.

E. D. NEWTON, formerly overseer of weaving at the Springs Cotton Mills, Kershaw, S. C., has become superintendent of Highland Park Mill No. 3, Rock Hill, S. C., succeeding J. J. LOVE, who has accepted the position of superintendent at the Ware Shoals Mfg. Company, Ware Shoals, S. C.

Obituary

G. MARION DUVAL, graduate of Philadelphia Textile School, at one time superintendent of Arista Mills, Winston-Salem, N. C., and secretary-treasurer of Social Circle (Ga.) Cotton Mills, was killed instantly by an automobile during July. He was 60 years of age. Funeral services were held July 21.

O. C. COPELAND, 61, superintendent of the carding department of Clinchfield Manufacturing Company, Marion, N. C., passed away the latter part of July.

WILLIAM GREENE HOLLAND, 60, at times connected with Peace Dale Mill, Lymansville Mills and Guerin Mills, Inc., passed away as the result of a heart attack the latter part of July.

CHARLES EDWARD INCHES, formerly treasurer of Androscoggin Mills and director of Cabot Manufacturing Co., passed away July 8 at the age of 54.

FRED R. COCHRANE, 54, manager of the Charlotte Leather Belting Co., Charlotte, N. C., passed away on August 14 of injuries received in an automobile accident on August 2.

If You've Just Been Promoted

A successful industrial executive who has been ""through the mill" gives the following advice to men who have recently been promoted:

Don't give the impression of having a swelled head.

Ask advice in getting suggestions from others.

Don't set out immediately to revolutionize things—take things slowly and you'll make better progress.

Lean over backwards to please the other fellow who might also have been under consideration for your new job.

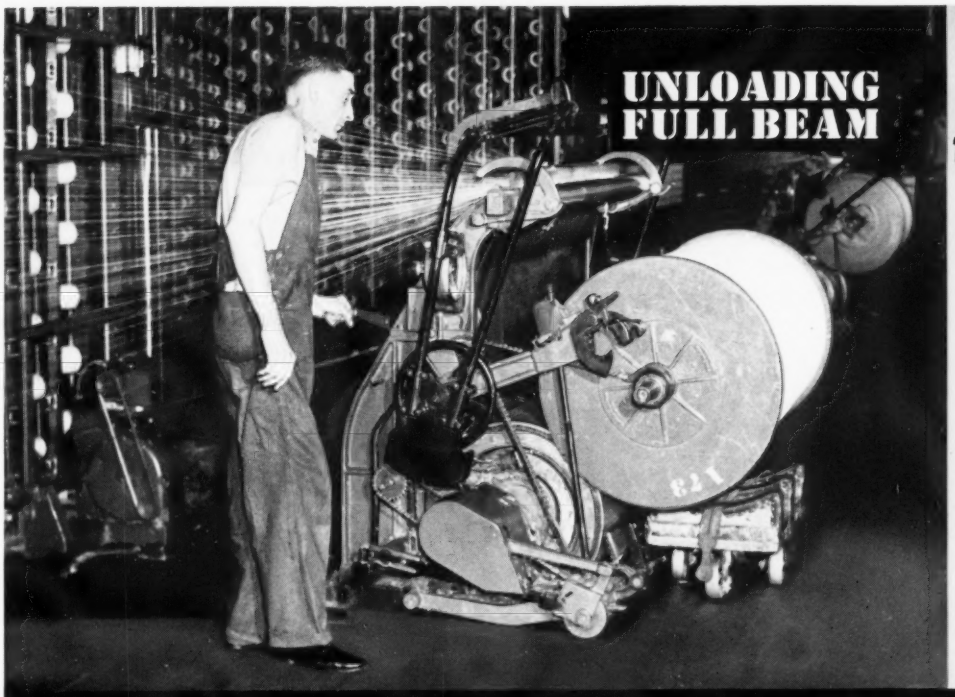
Delegate duties and responsibilities to others, but don't "pass the buck."

Give credit rather than grab credit.

Be on time. If necessary, come early and stay late.

Spend some of your spare time in laying plans for your ideal department. Then make every move fit into this plan, but move slowly and judiciously unless an immediate change is urgent.

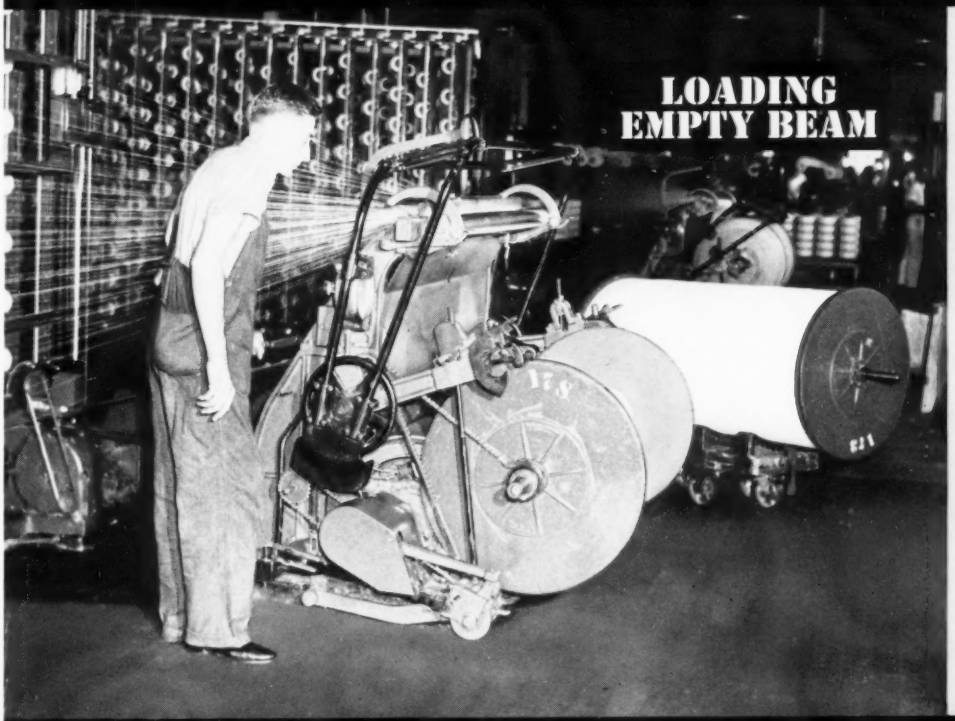
Take every opportunity to make people like you. Don't criticize your predecessor, and don't take yourself too seriously. A foreman with his "chin on his chest" doesn't make friends easily. — *"Management Information", Elliott Service Co., Inc.*



BARBER-COLMAN SYSTEM OF SPOOLING AND WARPING

BEAM LOADER SAVES EFFORT

One Man Handles Beams on Barber-Colman Warper



As shown in the pictures, a built-in crank-operated hoist enables the warper tender to doff and load heavy beams alone with relatively little effort. Extra hoisting machinery is eliminated, and the dangers of lifting the beams by hand are avoided. Another convenience feature by which Barber-Colman Super-Speed Warpers help toward efficient production.

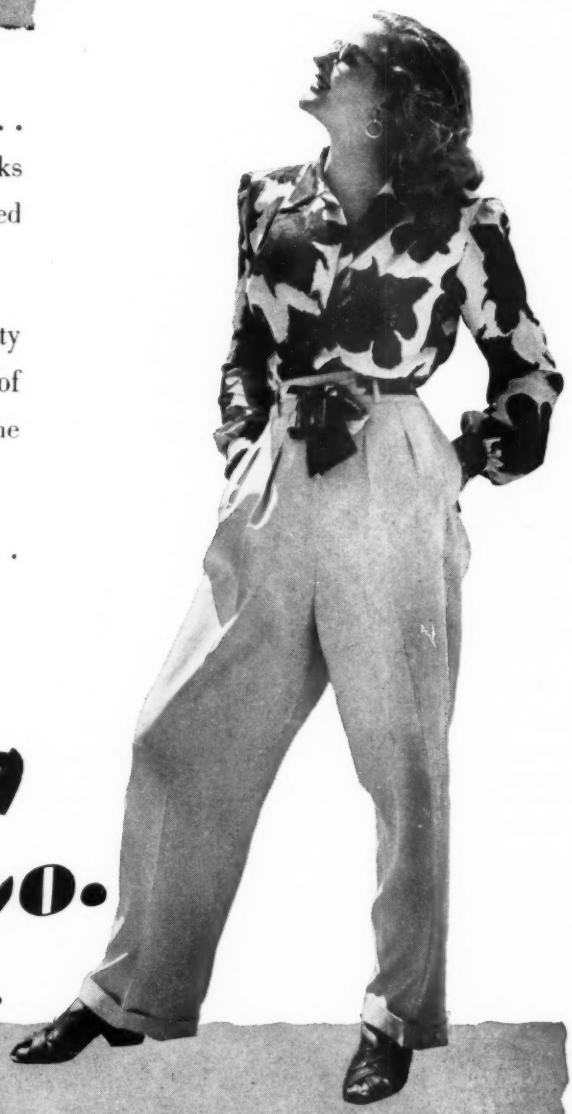
BARBER-COLMAN COMPANY

ROCKFORD, ILLINOIS, U. S. A.

FRAMINGHAM, MASS., U. S. A. • GREENVILLE, S. C., U. S. A. • MANCHESTER, ENGLAND • MUNICH, GERMANY

*PARAPON
*PARAMINE

Rhapsody in Fabric



♪ *Gay,* warm colors printed on smart rayon crepe . . colorful overtones in brilliant contrast to sleek sharkskin slacks . . creating in the consumer's mind a satisfaction that is reflected in increased sales for merchant and manufacturer.

♪ It is the *finish* that enhances the natural beauty and utility of the fabric, thus rewarding the ambitions and diligence of designer and producer, and overcoming sales resistance at the counter.

♪ That is why *PARAPON is used on crepe so extensively . . it satisfies the consumer's desire for a soft, full, rich finish.

♪ And *PARAMINE is increasingly in demand for finishing sharkskin . . to give it that mellow, smooth feel and pleasing appearance.

* REG. U.S. PAT. OFF.

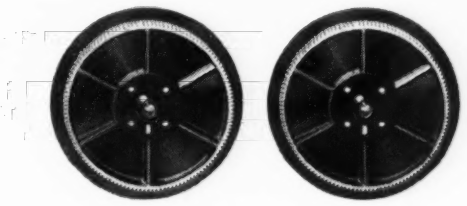
Arkansas Co. INC.

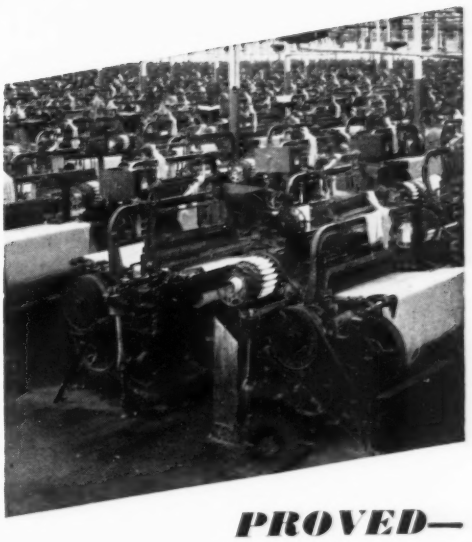
Manufacturers of Industrial Chemicals for over 35 Years

NEWARK, NEW JERSEY

LOOM BEAMS

BEAM HEADS





PROVED—
By Performance

BEAM BARRELS

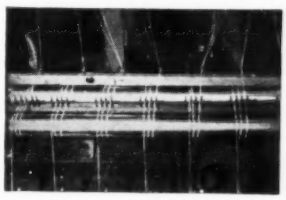
Superior in Operation and Economy

The beam barrels are made of a select grade of suitable wood, thoroughly seasoned. Journals are made from a tough plow steel to increase the wearing life. The wood grain is protected from moisture by a coat of special sealer and lacquer. All barrels are machined straight and true.

The beam heads are made of a high grade cast iron and are designed to reduce breakage. The pocket and bore of head is machined to fit barrel snugly and squarely.

The loom beams run true. Their sturdy and rugged construction will give long and satisfactory service Our loom beams will help you to increase your weave. room efficiency.

Other QUALITY Products



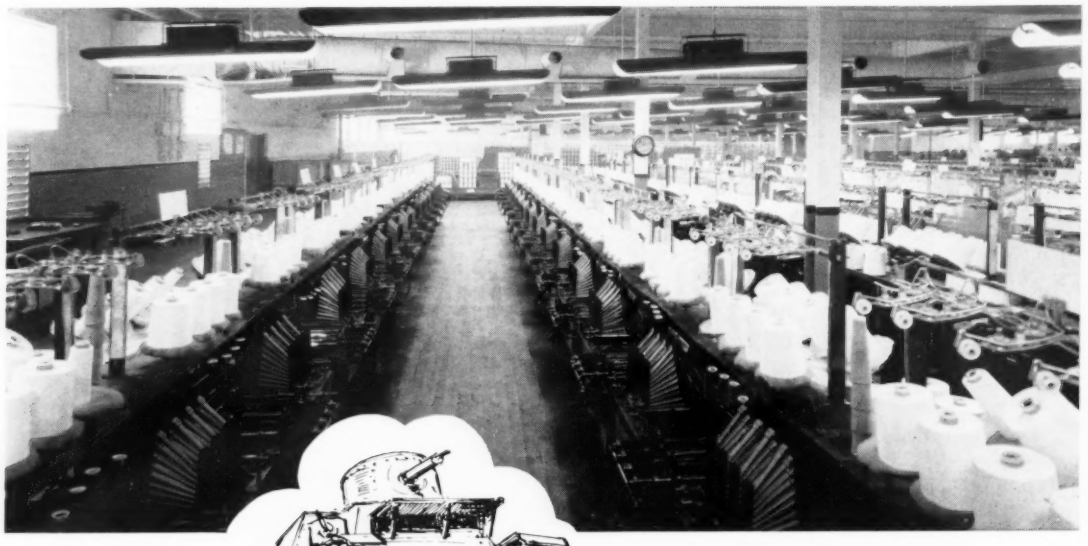
THE BACHMAN GUIDE . . . eliminates heavy top rollers. "Blow Outs" reduced about 90%. Permits increase in twister speed.

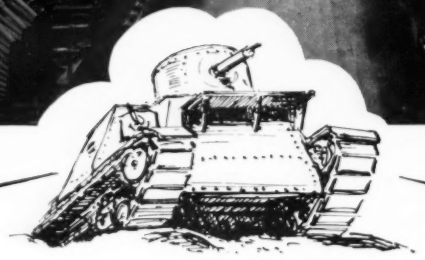
GEARS . . . Gears of all types —noted for their efficiency and durability.

Also manufacturers of special textile machinery, textile repair parts, gears, slasher modernization equipment, and cloth room machinery.

WEST POINT FOUNDRY & MACHINE CO.
(Batson-Cook Company, Owners)
WEST POINT, GEORGIA

OUR FIRST LINE OF DEFENSE IS OUR PRODUCTION LINE





A strong national defense requires diligence and skill in production as well as courage and skill for combat.

The cost of our national defense must be paid for by the production and operations of non-war industry.

We must keep our production lines moving. The textile industry is doing just that . . . and Sonoco is doing the same thing—supplying dependable service on textile paper carriers.

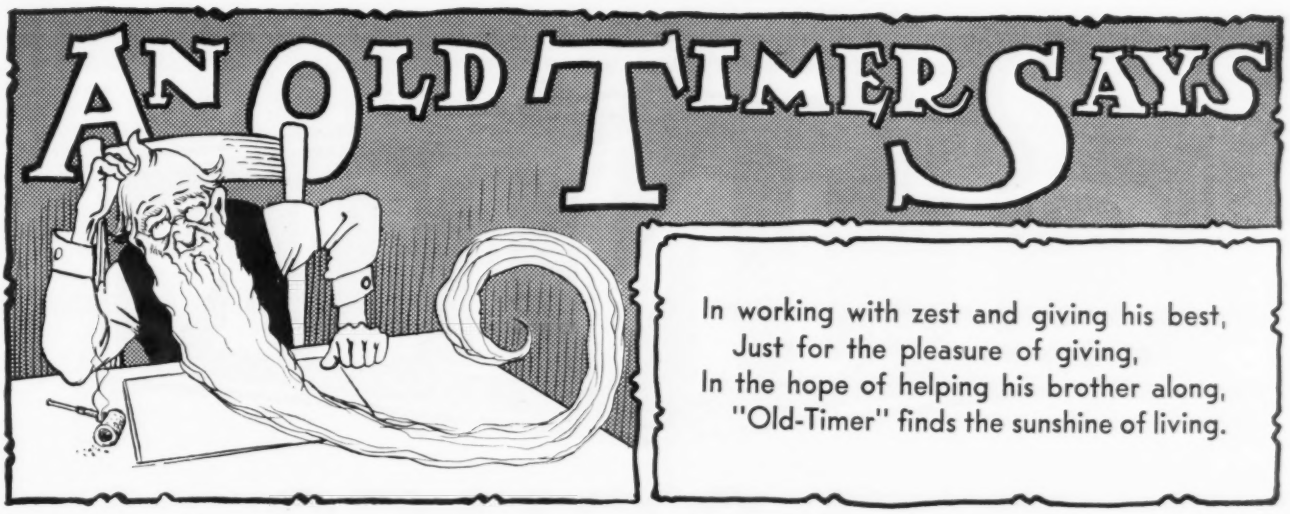
sonoco SERVES THE WORLD PAPER CARRIERS

SONOCO MAKES *EVERYTHING* IN *PAPER CARRIERS*

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. | HARTSVILLE S. C. | MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Are You Running a Third Shift?

(Since this article is written in conversational style, it should be borne in mind that those paragraphs in regular type represent OLD-TIMER's part in the conversation, while those in *italics* represent JIM's part.)

JIM, are you running third shift?

Yeh, of course we are. Everybody is. Why do you ask such a foolish question when you know all the mills are running all the shifts they can?

You did not catch my question correctly, JIM. I'll admit that all mills *think* they are running a third shift, but are they?

Well, for the love of Mike. You can ask the consarndest questions? What are you driving at, anyway, OLD-TIMER*? Got something up your sleeve again, or are you simply trying to trap me about my third shift?*

I already have you trapped, JIM.

How—

Now, just keep your shirt on while I ask you a few questions about your third shift, and be sure you answer my questions truthfully. You say you are running a third shift and I say you don't know whether you are or not because you have *never seen it.*

Heck, here are my reports showing exactly the number of looms, the number of spinning frames—

Sure, I know, JIM, but answer this question: Have you ever seen your third shift; have you ever seen the superintendent in the mill at 3:00 o'clock A. M.? Never mind, I'll answer for you: No. You have never seen the superintendent in the mill at 3:00 o'clock A. M., because you have never been there yourself.

What do you expect, OLD-TIMER*—for a man to work day and night, too?*

No, not at all, JIM, but I am trying to show you and all of the other overseers and superintendents and managers and presidents and all executives who have any connection whatsoever with any mill running a third shift that they are doing about the sloppiest job of managing anyone ever heard of. If I should suggest to any mill president that he could run his mill (first shift) without a superintendent, without overseers in any of the rooms, or without he himself ever seeing any of the operatives at work—what would he think of me? He would say: That fellow certainly don't know anything about a mill or if he does he has gone entirely crazy to think that a cotton mill could run without any supervision by overseers and superintendents.

Still that same mill president is allowing his mill to operate a third shift without any supervision at all—no superintendent—no overseer, and the weakest secondhands he has in the plant.

Besides, a third shift is a night shift, usually from 11:00 o'clock at night until 7:00 o'clock next morning. They go to work when other people are going to bed. They go to bed hoping to get some rest, when other people are getting up to start the day. Does anyone question the statement that no human being can get the rest trying to sleep in day time that other people get by sleeping at night? But we expect these third shift people to be more conscientious in their work, to do their work better, to push for production more, to avoid making seconds more than people who get a night's rest. We trust the third shift workers so much that we do not put an overseer or a superintendent over them to see that they do their work right—

For goodness sake, OLD-TIMER*, let up and let's talk this thing over—*

No, JIM, I'm not through yet. The third shift is always given the most inefficient operatives, operatives who can't get jobs on the first or second shifts, operatives who can't get the required production on the first shift where they have an overseer to check up on them and they all know that since practically all mills are running long cuts on looms and there is no way to show up bad cloth, therefore, no one takes the trouble to re-draw a thread which has been drawn in the wrong reed dent; no one takes out a double thread which the tying-in machine ties; no one makes any effort to make good cloth because they know there is no way for the overseer or superintendent to know which weaver made the bad cloth.

Long cuts run by the mill to save the finishing plant a little trouble have cost the average mill ten, yes fifty times more than they saved the finishing plant, besides causing a thorough demoralization of

(*Continued on page* 112)

CLINTON

STARCHES

FOR ALL TEXTILE PURPOSES

QUALITY ▲ SERVICE

CLINTON COMPANY

CLINTON, IOWA

Cutler

SAK TAPE

DECREASES POWER CONSUMPTION
and
INCREASES PRODUCTION

The use of CUTLER TAPE will decrease power consumption and at the same time increase yarn production. Increased yarn production results from increased spindle speed, and mills using CUTLER TAPE report an increase of between 200 and 300 r.p.m. over ordinary spinning tape. This represents a yarn production increase of approximately 2%.

BUY CUTLER TAPE AND SAVE!

ROGER W. CUTLER

BOSTON, MASS. GREENVILLE, S. C.

HOW OTHER MEN MANAGE

Variation in Yarn and Low Break

This man gives some of the little things that cause variation in yarn and low breaking strength, and points out that it is usually an accumulation of small items that make a job look big . . . . . .

THE MANUFACTURING specifications given in the following letter are from our "CONTRIBUTOR No. 7196" who complains of having too much variation both in his roving and in his 41s filling yarn, combed stock, and too low a breaking strength. He asked for comments on his present manufacturing set-up. His question originally appeared on page 174 of the March issue.

"Cotton 1 1/16-inch Strict Middling; 12-ounce lap, 3-process of pickers, breaker picker 3-blade rigid beater giving 26 beats per inch, intermediate picker with 2-blade rigid beater giving 46 beats per inch, and finisher picker with 3-blade carding beater giving 32 beats per inch, making a total of 104 beats per inch. We allow one-half pound variation each side of standard in picker laps.

"Card drafts 110.8, making 45-grain sliver, with 100 per cent production being 6.3 pounds per hour. The sliver lap is 750 grains and drafts 1.44 and the ribbon lap is 750 grains drafting 6.00 (6-lap machine). There is a 50-grain comber sliver (8-lap machine) drafting 102, getting 230 pounds per 10-hour run.

"The drawing sliver is 50-grain with 6 ends up, 2-process, drafting 6.00. We have late model Super-draft slubber, 8x4-inch, making 4.10 hank roving, drafting 24.60, with twist multiple 1.23 times the square root. The 41s filling has a 3.20 twist multiple."

EDITOR COTTON:

Replying to "CONTRIBUTOR No. 7196", he has left out several very important factors relative to yarn variations and low break. It would be easier to advise him if he had gone a little more into detail, so that we could approach his problem more intelligently. We are going to treat his problem from a carded yarn viewpoint inasmuch as our experience on combed numbers has been limited.

Beats per Inch Too High

It would be interesting to know how "CONTRIBUTOR No. 7196" is opening his cotton. The stock must receive the bulk of the cleaning in the opening room if he wishes to preserve the strength that is in the individual fibers, which, after all, is the strength of the yarn.

We think that 104 beats per inch is too high for 1 1/16-inch strict middling cotton. If he will go back to the opening room and do more cleaning and opening, and at the same time decrease his beats per inch to around 80, he will find that the stock will be just as clean and the breaking strength better.

Increased beats per inch does not necessarily mean increased cleaning. In fact, the damage one might do to the fibers by over-beating can more than offset the small amount of additional waste taken out.

Considering the setting of the beater to the feed rolls, I would suggest 1/4-inch on the breaker and 3/8-inch on the intermediate and finisher sections. The edges of the beaters must be sharp and true. He should also examine the air drafts and see that the stock is being distributed evenly over the screens.

Checking the Pickers

It will be well to check the eveners. This mechanism must be sensitive and very prompt in action. After all, the evener on the picker is the only evener motion throughout the mill, so this one should be in good working order. Examine the evener cone belts; there should not be any slippage. For this purpose we suggest an endless belt kept at the proper tension. A slipping cone belt on the picker makes uneven laps and of course this causes uneven yarn. The mechanical parts of the evener must be kept clean and free to move promptly.

The yardage knock-off should be checked to determine the accuracy of this measuring device. There is no need to hold the weight of the laps to a predetermined tolerance if the picker is not measuring the laps correctly. There are several knock-off motions available that this man will find helpful.

Checking the Card

His draft of 110.8 seems to be in line, assuming that this draft is actual.

He did not give the feed plate setting on his cards, and it could be that this setting is too close. My suggestion for 1 1/16-inch cotton is a No. 12 gauge.

Sharp lickers-in are essential to good breaking strength. And while on the back of the card it will be well to examine the feed rolls and bearings for wear.

There are other places on the cards that often

WE INVITE readers of "Cotton" to submit inquiries relative to any type of mill problem, from machine settings to personnel problems. Where questions concern technical problems, please give in detail your present manufacturing specifications pertaining to the immediate problem as this will permit a more intelligent approach and answer to the question. Readers are invited to make use of this magazine for the discussion of any and all problems, and letters, questions or answers need not conform to any particular style as they will be properly edited before publishing. Where questions and answers are submitted, no identification of the source will be made, but will be published under a "contributor number".

are overlooked that will cause uneven sliver, namely, the comb and trumpet. The comb should be set so that there is no stretch between the comb and the doffer.

As a rule the trumpets on a card get very little attention. Most carders feel that they never wear out. If the trumpet bores are correct for the weight sliver being run they will prevent much variation in numbers and weights. A good rule to follow is $\sqrt{\text{Grains per yard}} \times .0227$ which will give the bore in thousandths of an inch.

Drawing Frames Can Cause Trouble

Carders know the value of having everything right on the drawing frames. Clean rolls, oiled properly, and good piecing-up at the front and back, knock-off working quickly, and even tension, are factors well worth the effort if one is striving for an even yarn and good break. Here again (the front of the drawing frame) is where bad trumpets and poor tension can cause an untold amount of uneven sliver.

We might add that tensions are important throughout the mill and it is our opinion that they are the most neglected factor in the card room.

The cards on fly frames should be examined and put in perfect alignment. The flyers and their pressure must be right, balanced and well polished.

Back Rolls are Important

Here on the fly frames, as well as in spinning, clean, well oiled rolls are necessary for even stock. Also, one must have good rolls. Regardless of the type of material used, it is important to see that the rolls are kept in good condition, keeping in mind that the back rolls are just as important as the front rolls, the only difference being that with a bad front roll the work runs poor and with a bad back roll the damage is done by making uneven stock, which is not detected until the yarns are in the goods. Unless the top rolls are smooth and spaced properly, the draft will be irregular and there will be uneven yarn.

Skewers should be inspected and the blunt-ended ones replaced.

Of course "CONTRIBUTOR NO. 7196" recognizes the value of uniform spindle speed and knows the value of having tapes or bands at uniform tensions. Slack tapes or bands will cause uneven spindle speeds and varying turns per inch in the yarn.

We have tried to point out the little every-day things that cause uneven stock and poor breaks. It is our opinion that too often we overlook the little every-day occurrences in an effort to find something big. Most times it is an accumulation of little things that cause us to lose perspective and before we know it we think we have a tremendous problem on our hands.

Good breaks and even yarn are no happen-so. No one factor is going to make a tremendous difference, but correcting many small defects will add up to a staggering total.

It is also well to keep in mind that every time we eliminate a process or doubling, we have to improve the evenness of the stock delivered in the preceding processes.

CONTRIBUTOR NO. 7228

Causes of Uneven Roving

EDITOR COTTON:

Uneven roving has, perhaps, caused more headaches to the mill executive than any other trouble that comes up in the manufacture of yarn and the finished product from the weave shed. Thick and thin places in the yarn which show up more in the cloth than on the quill of filling are definitely caused by something before it reaches the finished goods process of the weave shed. "What causes this trouble and how can it be reduced to a minimum?" are the questions that are immediately asked of those who are responsible for the process of manufacture before it reaches the weave shed.

There are any number of things that may cause unevenness in roving. The big troubles stand out to themselves while the little things that may be causing the troubles are overlooked simply because they are small. I might add that the smaller they are the harder they are to find.

Opening Room

Since the process of yarn manufacture begins in the opener room and ends in the spinning room, it might be well to begin in the opening room to correct uneven yarn. Let us assume that the operator in this department is doing his work satisfactorily in the mixing and blending of the stock he handles. We might assume that the equipment in the opening room is entirely suitable for mixing and blending as it passes from one machine to another. Suppose we check the opening room equipment to see if by any chance something there may be partly to blame.

Speeds of machines will necessarily have to be checked to see if they are doing what is required of them for the proper mixing and cleaning. Next, it will be well to examine the settings of beaters, grid bars and conveyors. This is important because in the opening machinery pieces of cotton tie, buckles, bolts or metals of various kinds sometimes go through these machines with the stock. Should this metal be struck by the beaters, or thrown against the grid bars by the force of the beaters, it is likely that the beaters and the grid bars will be burred or roughened in such a way that the stock hangs to them and becomes twisted by the centrifugal force of the beater. Afterward it may become loosened by the sheer size of the lump that has collected and this lump of stock goes on to the next machine where it may be broken into a number of hard packed twisted masses of cotton which in turn passes on through the other machines of the opening room to the picker room.

Checking the Pickers

As the stock comes to the picker room it is received by the condensors which drops it into the distributors or gyrators which in turn supply the hoppers of the pickers. What is the condition of the condensor? Is the screen cage in perfect condition? Has it any sharp, worn or ragged places on it that might hold and consequently curl and twist the stock as it

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passes from it? Is the damper set properly and is it smooth or does it have rough, sharp, ragged edges, or burred places on it that will catch and hold stock so that it becomes twisted, curled or rope-like and consequently will be carried to the picker hopper? Where gyrators are used in the picker room, how often are the crankshafts cleaned and this twisted ropelike cotton removed?

Why stress these hard twisted masses of cotton at this stage and as it passes through the picker room? The beaters on the pickers break these masses into thousands of smaller masses on its way through the picker. Rough or burred places on the grid bars and screen cages of the picker will cause these twisted masses to be formed and finally they wind up in the finished lap, which may weigh up perfectly on the scales. Only very slight carding, if any, is done in the picker room by the Kirschner or carding beater.

We are now ready to follow this stock to the cards to see what the result will be there. These laps containing lumpy work are laid on the cards and the stock passes through. Let us assume that the card has been stripped and the lap laid in. If the production of the card is too high it will soon be noticed that the web contains a number of specks and dabs of uncarded fibers simply because the stock doesn't stay in the card long enough to be carded. These twisted masses are in the sliver to a lesser degree than were in the lap because of the carding, nevertheless, they are there. These are troubles that were caused before the stock ever reached the card room.

Poor Work at the Card

What might cause these lumpy masses in the card sliver that are directly the work of the card? There are a number of things about the card that may be responsible for bad work. A worn or dull licker-in or a licker-in in which a piece of metal, such as was mentioned on the openers, comes into the licker-in, dulling or bending down the teeth, will cause lumps or dabs in the web as it comes from the doffer. It is impossible to card the size lumps that will be taken from the lap fed in if there is a dull or badly worn licker-in.

A lap will form around a bad place on the licker-in where, perhaps, a piece of cotton tie or other metal has come in contact with the licker-in, and where this lap is on a licker-in, dabs of uncarded cotton will show up on the doffer directly in line with this lap.

Should a line of the licker-in wire come loose and be removed, watch out for dabs of uncarded cotton because the licker-in cannot give good service unless it is up to standard.

If either the back or front plates are set close enough to rub the clothing on the cylinder it will cause the cylinder to be faced, or the fillet will become dulled and instead of the cotton in the card being carded and removed by the doffer it will tend to cling to the cylinder until it becomes loaded, and as it is removed by the doffer dabs of uncarded or poorly carded cotton goes into the sliver.

Should the doffer be set too close to the cylinder both the doffer and cylinder become faced and the same troubles are experienced. However, a good card grinder knows when his card is set according to rules laid down by his overseer for good work and if any of the foregoing settings should cause the poor work on the card the grinder is responsible.

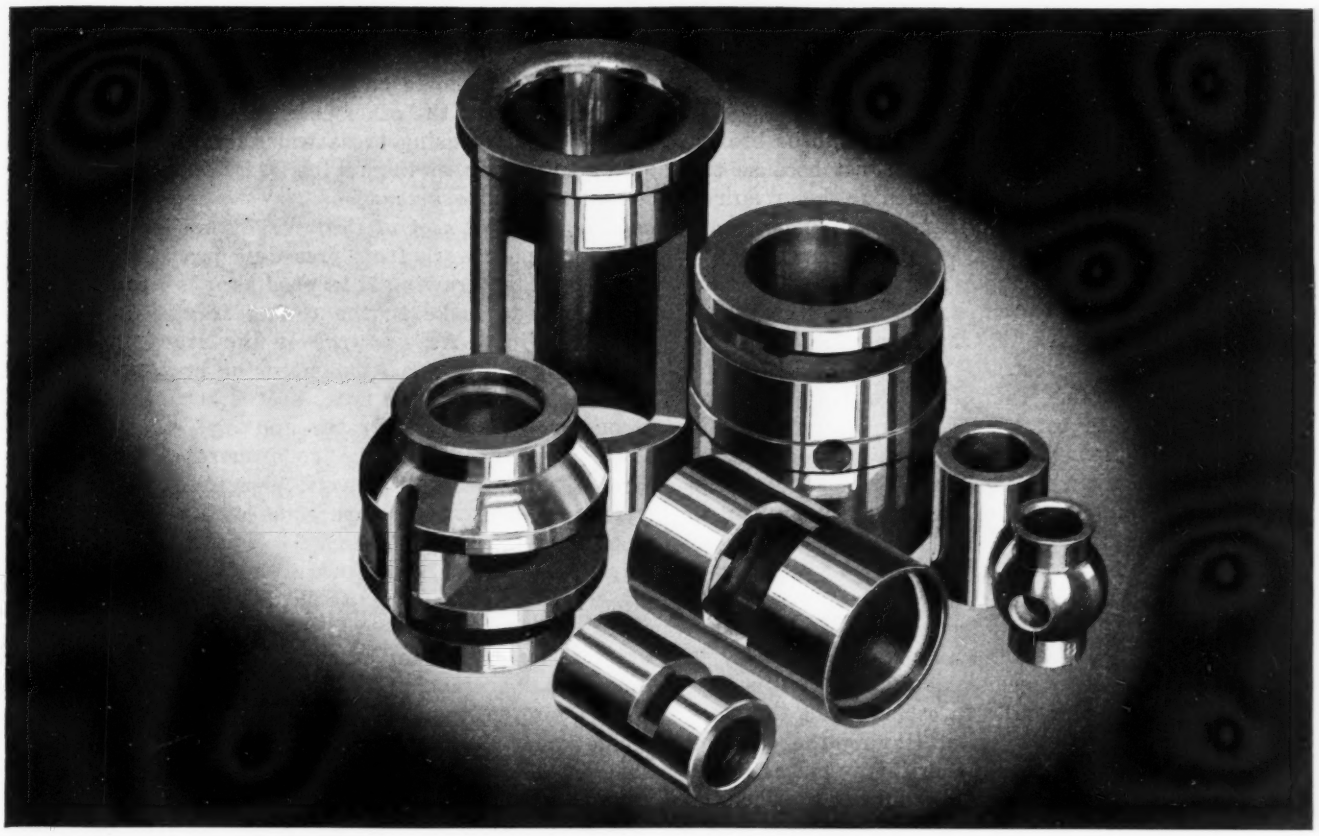
A greasy spot on the screens is likely to cause a lot of trouble, and by the fact that it is hidden it may not easily be detected. Both screens should be removed and examined every time the licker-in is set. It should be cleaned thoroughly and any bad or worn parts should be replaced. I think the time spent on this operation would be well justified in preventing as well as correcting bad work. How often the cards are rolled out from under front and back will often times answer how often bad work is being made because of chokes from fly and waste that is removed by the card. I have seen chokes under the doffer cause any amount of trouble to the card hand because of negligence on the part of some other employee in not doing his job well.

I have known the front plates to become sprung or knocked out of adjustment, or sprung into the cylinder by the strippers slamming the front cover after stripping instead of laying the door back in place with a more gentle motion. This, of course, spells trouble later one, not only for the operator but for the grinder whose responsibility is keeping the cards in the proper running condition.

Suppose any one, or several of these conditions exists either from the picker room or from the cards and these lumps and dabs are going into the sliver from the cards. The carding process has been finished and the sliver is now ready for the drawing frames. Here it is doubled five or six times and drafted. If we have one or more cans of sliver from the cards to each delivery on the drafting frames, containing these lumpy masses and dabs of cotton, they cannot be drafted properly and evenly. They may be broken up into a number of smaller units which in turn go through the next process of drawing the same way.

Poor Work at Drawing Frames

Now, let us assume that all these dabs and lumps in the card sliver have been reduced to a minimum by proper checking of all previous operations of manufacture. Can lumpy drawing be caused by the drawing frames themselves? To a lesser degree, yes. A top roll may be dragging because of a choke in the bearing collar or for lack of oil. It may not be dragging enough to stick which would cause chopped drawing, but just enough to cause a slight unevenness that would let the stock pass on through the trumpet. Perhaps an end will begin to sag and finally loop as it goes through the trumpet. Of course, these loops will stay in the drawing and finally show up in the roving and then in the yarn. There may be a choke around the bottom roll caused from clearer waste that has not been removed by the drawing frame hand and this would cause uneven drawing. Then again, the flutes on the rolls may become filled with moats, belt dressing or some other substance that would cause the roll to jump slightly and cause these lumps to be formed. Sometimes a burr or rough place on the spoon will cause fibers from the drawing to cling to the spoon until a lump has formed and which turns loose after a time and passes through the rolls with the drawing. Bad splicing where the end comes down



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or in creeling the frames account for a number of thick and thin places.

Any amount of bad work is caused when the top rolls are propped up with a piece of cotton.

This causes the selvage of the sliver to be broken all along its passage into the can. Just because the drawing frame operative is putting the required amount of stock through the frames doesn't necessarily men that he is an efficient employee. He is operating one of the most important steps in the manufacture of the finished product, and should be a man who is willing to learn the causes of bad work and to profit by his experiences.

A drawing frame that isn't running properly should be reported to the section man immediately and proper adjustments made so as to remedy the trouble. The drawing frame operative should be satisfied with nothing less than first class production to pass through his machines. A large percentage of bad work may be coming from the drawing frames and it lies in the drawing frame operator's power to cause untold trouble through negligence and inefficiency on his job. If he allows bad work purposely to pass his process, all consequent operations will suffer by what he has turned out. In other words, the stock can't be made any better after leaving the drawing frames. If it has heavy, light, or lumpy places in the finished drawing sliver they will still be there when the cloth is inspected in the cloth room. Bad stock should be corrected first on the cards and then at the drawing to insure a uniform product in the other processes. If it were practical to card and draw out these curled rope-like masses found in the sliver, then it would be just as practical to dump all the roving waste into the hoppers of the pickers and hope to get a good stock off the drawing frames.

We now go to the slubbers with the finished drawing, or to the long draft roving frames which give more draft to the drawing than the slubber does. Let us keep in mind that the drawing is the same stock we have followed from the opener room.

What happens on the slubbers and long draft roving frames? Remember, that where the drawing is run directly into these frames there is no doubling done here as was the case at the drawing frames. Here we have only one strand of drawing. This one strand of drawing is drafted as much or more than was the five or six strands on the drawing frame, depending of course on the size of the hank roving being run. Are these lumps and dabs drafted out here so that they will not show up in the spinning process? No, they will remain and pass on to the next operation as they have heretofore. The process of drafting is practically the same here as at the drawing frame. The feed roll and each successive roll acts in the same way here as on the drawing frame. These lumps, which of course are smaller, will be broken to some extent as they pass each roll but they will come out in the roving. When this roving is sent to the spinning room where it is drafted into yarn there the unevenness will be marked because it is more easily seen.

To the experienced eye this bad work can be seen and should be corrected on all operations preceding this one. Unevenness in roving will of course cause the same condition to exist in the yarn. Watch closely and you will notice places as the roving passes to the flyer that seem to be wider or that don't contain as much twist as the other coming from the delivery roll. What is causing these wider, or partly twisted places to appear in the roving? *Perhaps it doesn't contain the same amount of twist because it didn't get the same amount of draft.* This may have been caused by poor work from preceding processes.

Even if the drawing is as good as it is mechanically possible to make it, the roving frame can cause uneven roving. As was true on the drawing frame a dragging roll or a roll that needs oil may cause this to happen. Part of the flutes on the bottom roll may become so filled with grease and dirt, that as the stock passes between the rolls more would come through where the flutes were filled than where they were not filled. There are some who may want to dispute this. The flutes on the bottom roll help to grip the stock and hold it while the next roll does its drafting and if the flutes are filled part of the gripping effect is lost; the next roll, which is speeded faster, tends to pull a greater amount of the stock through than would ordinarily be the case had the roll been free of foreign matter. Naturally as this stock passes from the front roll it is somewhat heavier than it should be, due to the fact that it hasn't had the same amount of draft, and it happens, that the stock immediately following will be lighter. Naturally this roving is uneven due to thick places and thin places.

Let us consider the covered rolls on the fly frame. They should be in good condition in order to give satisfactory work. When leather cots become worn and soft or loose they should immediately be replaced with a new covered roll. In the case of rolls covered with cork or composition, they should be re-buffed where it is possible to do so. When rolls become worn or concave, from the movement of the traverse, they begin to lose their usefulness in so far as good work results, because some of the drafting is being lost through slippage of the stock between the rolls. In reality that stock on either side of the roll that has become concave is getting more draft than that part in the center of the stock, because of this concave shape of the worn roll. This being the case, the outer edges of the roving is naturally stretched and broken while the center is harder than it should be, which would cause the cots of the covered roll on the spinning frame to wear faster than would be the case if the rolls were in the best of condition on the slubbers and fly frames.

These worn rolls can easily be detected by placing them on a flat surface and holding them to the light. When they show up to be in bad condition it is time to have them re-worked.

CONTRIBUTOR No. 7246

Mop Catches in Pulley, Handle Strikes Stomach

A roving frame hand was passing a frame with a mop which caught in the pulley and whirled around. The handle struck the man's stomach and caused an injury from which he died. Even though pulleys and gears are considered to be located where machine operators are unlikely to be exposed to them, they should be guarded. Guarded by location means that the pulley or belt is so close to the wall that a mechanic or cleaner can't get in.—*"Textile Safety", National Safety Council, Inc.*

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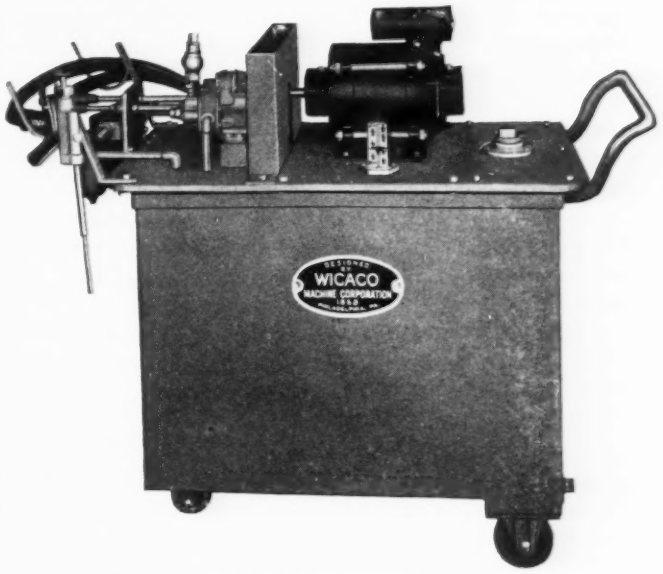

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Weave Room Seconds

EDITOR COTTON:

Your "CONTRIBUTOR NO. 7249" has asked, in his question on page 95 of the August issue, for a discussion of seconds in the weave room and how they may be prevented. I agree with him that this is a broad and general subject, but at the same time I agree that much good can come of such a discussion, and I therefore am giving my opinions on this subject.

It behooves every man connected with the manufacturing of cotton goods to stop long enough and ask the question: "What causes seconds and how can we remedy them?"

With this question before us we have separated seconds into three groups: First, mechanical; second, non-mechanical, and third, general.

Mechanical and Non-Mechanical Causes

Under mechanical causes for seconds we find among the many the following major causes: Thick and thin places, bad temple, jerked-in filling, kinky filling, thin place preventer, bad harness, bad reeds, reedy cloth, wavy cloth.

Thick and thin places can be helped by the let-off and take-up motions being properly set. Sand rolls should be free; journals should be built up if worn; fillet if worn, torn or rusty should be replaced. Bad temples cause bad selvages. The temple burr is often worn out, but because it catches in some places we neglect to renew them. The temple, if set too low or too high, causes stringy selvages. Bad harness should not be used at all. Occasionally a heddle breaks, but an alert weaver can find this.

Reedy cloth has caused more gray hairs than seconds. Reedy cloth is usually made because the loom fixer or warp man is too anxious to get the next loom started, to get more picks with, too often, no regard to the quality. A loom neglected for a few minutes will result in a cut of cloth being put into seconds. Improper adjustment and setting of the whiproll will cause reedy as well as wavy cloth. There is a difference in reedy cloth and bad reeds.

The same that is said of harness can be said of reeds. The management too often saves the price of reeds and harness and pays a very high price in second quality cloth produced.

Quite a number of mills are equipped with thin place detectors. Great care should be used in setting this device. About three-quarters of an inch from the fell of the cloth is the correct position for the finger. Jerked-in filling is another cause which is a result of poor loom-fixing, assuming that, of course, the filling is being made correctly in the spinning room. We have found that with the Stafford thread cutter, jerked-in filling is a thing of the past, usually. Good results had been obtained on the Hopedale thread cutter by adding to the metal knife a piece of fiber of the same shape, a little thinner perhaps, which tends to hold the filling on the change.

Under non-mechanical causes we list: Bad selvages, coarse thread, hard size, rusty selvage, strings and mis-draws. This at once takes us to the slasher room. In the opinion of the writer the majority of bad selvages are traceable to the slasher room. Creels not in line, cylinders not level, drag rolls with journals worn—all these can be corrected by checking up at the slasher room. Hard size caused by not cooking properly, lack of controls on kettles, cylinders and size boxes, rule-of-thumb methods by slasher tenders, can be corrected with proper supervision. Loose strings left on section beams when laps are cut off, then running through size box and dried, will cause mat-ups on the loom. Rusty selvages and strains are caused by floating scum in the size box. A general check-up and proper supervision in the slasher room will prevent most of these.

General Causes of Seconds

Under general causes we name oil—slasher oil, black oil, yellow oil, blow-off oil, oily filling, oily selvage, cloth roll rust, dirty hands and dirty water. We can offer only one cause for these, this is carelessness. As it is the usual practice when employing an oiler to just give him an oil can and tell him to oil around twice a day, we pay a big price for our own carelessness in allowing this to happen. Cloth doffers and others will be inclined to keep their hands cleaner if wash racks, soap powder and rags are provided.

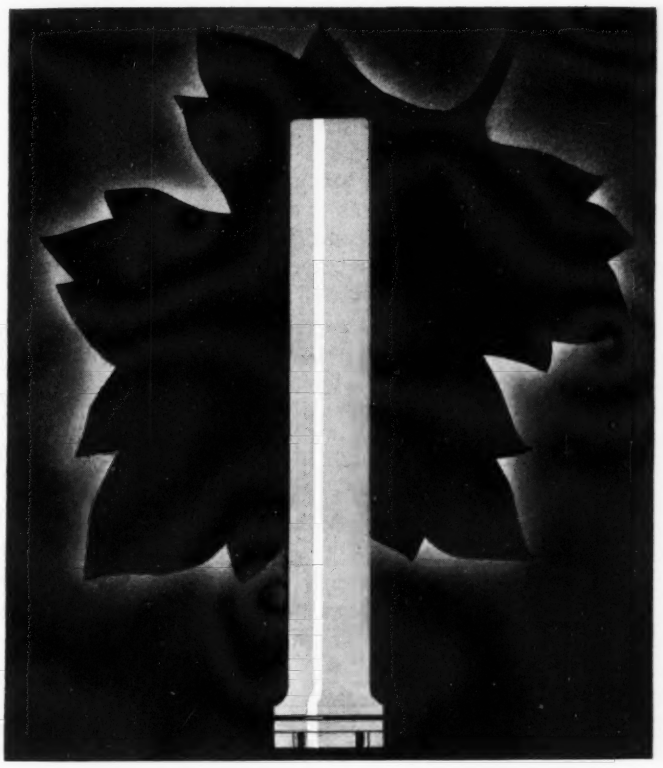
Rusty cloth rods cause seconds. Some mills have gotten away from this cause by using paper cores. This works out well, when the cloth tube or paper core is slightly larger in diameter than is the cloth rod.

Dirty threads cause seconds. They are usually put around the arch of the loom in a bunch, where they accumulate dirt and oil and flying, then the weaver ties up an end showing a long streak of oil. A preventive for this is to use cloth tubes, cut two feet long, suspended under the arch and tied with wire or thread. Into this tube warp thread is run and cut off flush with each end. In the center of the tube is cut a small V-shaped hole. The tie threads are thus kept clean and free from flyings.

Ropy filling, cockled filling and kinky and mixed filling, as well as coarse threads and cut filling are all seconds breeders. The best remedy is to show them up to the spinning and carding departments, as they are caused there.

Summing up, we suggest the following preventives for seconds: 1st, have a careful cleaning of each loom on the warp out. 2nd, proper oiling and supervision of oiling. 3rd, general tightening up and going over all parts necessary by the loom fixer before tying on warps. 4th, have secondhand okeh each warp after loom has started up (a warp tag on each warp with printed items between the cloth and weave rooms). 5th, at least once a day have a meeting in the cloth room with superintendent, overseers of cloth, weaving and preparatory departments, to look at seconds, discuss them and make plans to eliminate them tomorrow. The best of all rules is: don't let the cloth room get behind, *and keep everlastingly at it.*

CONTRIBUTOR NO. 7250



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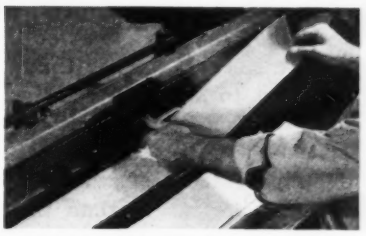

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Licker-In Loading-Up On Rayon Staple

EDITOR COTTON:

Any time that blends of fibers are being run, where one fiber takes on more moisture than the other, there will be trouble with the licker-in loading up. In the case of rayon-wool blends, the rayon will absorb moisture quicker than the wool so it is very important to keep the relative humidity where the rayon will take it at about 55 per cent relative humidity. It usually requires about 65 per cent relative humidity for the wool because it is dryer and the fibers are larger than those of rayon.

Where the improper relative humidity is run, the wool will pass on through the card and the rayon will lap around the licker-in. Cotton will also pass on through in the same manner as does the wool, that is, the longer fibers will lap around the licker-in and the shorter ones will be passed along through the card.

Too much speed will also cause the licker-in to lap up, and I have found that a speed of from 350 to 375 r.p.m. is the best for running spun rayon and its blends. This speed is run on my lickers-in and I believe my spun rayon runs better than 1¼-inch cotton. Hooked points on the licker-in will also cause it to load-up.

Other causes for loading up are insufficient weight on the feed roll of the card, or too heavy a picker lap. A lap of from 13 to 14 ounces has proven satisfactory. I run a 13½-ounce lap and have no difficulty with loading-up.

The feed roll should be set to 17/1000-inch. Some mills that set the feed plate to 34/1000-inch have trouble with lickers-in loading-up.

I have found in running various types of fibers that it requires more moisture for cotton than rayon, and more for wool than cotton, and less moisture for rayon than either cotton or wool.

CONTRIBUTOR No. 7252

The Old Card Doctor

Runs his lickers-in at 675 r.p.m. and gets quality work (with a few other changes).

EDITOR COTTON:

It has been several months now since "THE OLD CARD DOCTOR" has sent in any news of importance touching on the subject of carding methods. Well, here he goes again because the boss says he must have more production and he also means quality.

Pondering the subject, will the web be just as clean if the card is to get more production? No! Well, we must keep the same cleanness in the stock. How many revolutions per minute should the licker-in make with a doffer speed of 9 r.p.m., and how many should it make if the doffer speed is increased to 13 r.p.m.?

The "doctor" speeds up some lickers-in to 675 r.p.m. and runs a test through the mill and gets satisfactory results in his finished goods. How does he get these results and not injure his staple? Simply by setting the mote knives and back knife plate to take care of this increased licker-in speed. By the foregoing method the "doctor" has increased his card room production 45 per cent with very little added expense.

There is an additional amount of foreign matter whipped out of the cotton as it comes in contact with the high speed licker-in and somehow the tensile strength of the yarn increases slightly with the higher speed. The doctor also speeded up his card cylinder to 170 r.p.m. and saw no harm here.

So, the doctor got an increased cylinder speed and an increased licker-in speed, and even in pattern goods it was entirely to the satisfaction of the plant's management.

The doctor also ran extra high speeds in the picker and other cleaning machinery with outstanding improvements in the goods being manufactured under these conditions.

One of the doctor's friends visited the plant and asked about all of these radical changes. But the doctor told him that the travel of the cotton with the higher licker-in speed was in proportion to the flow of cotton in the low licker-in speed bracket, so if the delivery were greater, why not increase the licker-in speed to keep the same proportion of cleaning.

An Old Timer Says--

(*Continued from page* 101)

the help in the mill. Where is a mill which is running three shifts and taking off cloth only when the loom will hold no more, I say, where is just one such mill that is showing bad cloth to the weavers? Where in Heck is our management going anyway, or to say it probably more correctly, where has it *gone?*

O. K., O. K., OLD-TIMER! *Now that you have got that off your chest, suppose you settle down a bit and answer my question, and that question is: What in Heck can a fellow do about it?*

That depends, JIM, on a lot of local conditions. Of course if I owned a mill I certainly would not run a third shift provided I had to operate it without any supervision at all just like most mills are doing now.

Say, OLD-TIMER, *I've got an idea.*

That's fine, JIM, shoot.

Well, if all mills are operating a third shift the way you say they are, maybe they just don't give a darn and may not be interested in hearing what you have to say about a third shift that could be run with the proper supervision; that is, how they could arrange to give the third shift the proper supervision without having to put on any extra men, and an arrangement whereby the supervision could be obtained without additional cost to the mill.

Good idea, JIM. We will not discuss the matter further, but if any superintendents or managers or presidents who read this would like to know what the system is, then let them write the Editor of COTTON and request it. To those men who are interested enough to ask, we will be glad to answer their request and give full details.

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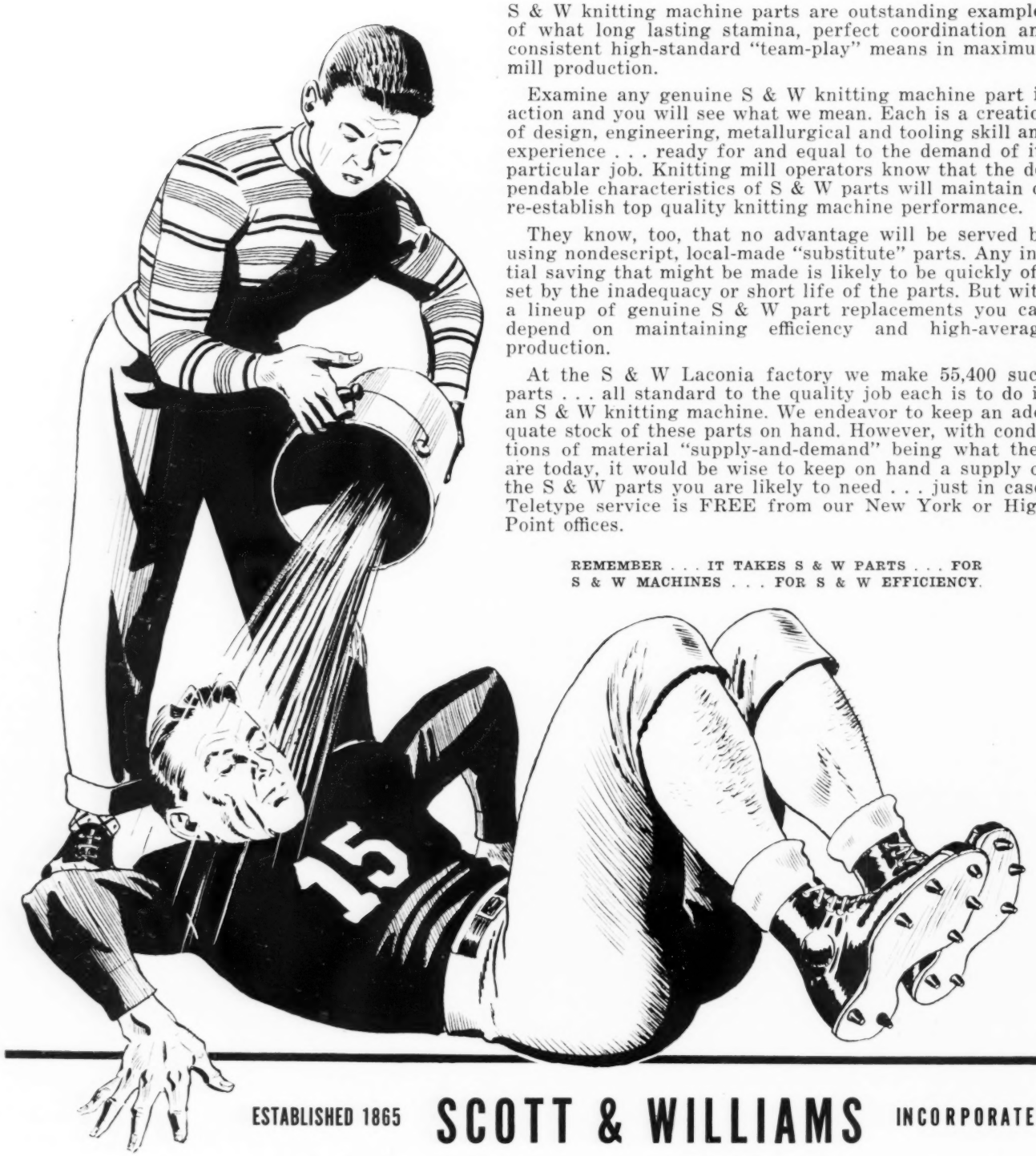

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KNITTING SECTION

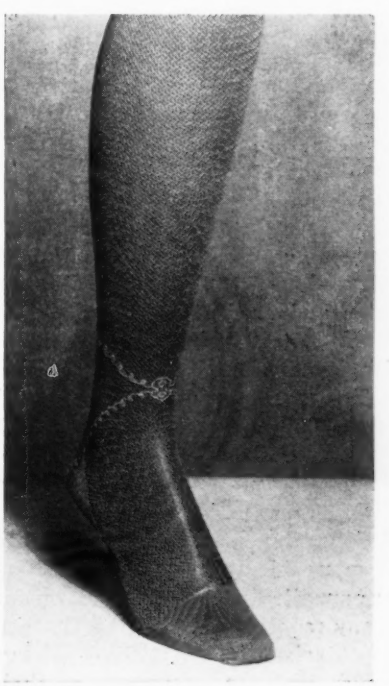
A Review of the Silk Situation

THE AMERICAN full-fashioned hosiery industry, since July 25 when Japanese assets in this country were frozen under an executive order by President Roosevelt followed by the Office of Production Management ordering cessation of movement of silk, has been confronted with its greatest crisis. The situation has been without equal since the full-fashioned hosiery industry originated because manufacturers have never been in a position previously where they could not obtain the raw material as needed.

In the weeks which have followed and up to the time of writing (August 16) there has been much confusion with manufacturers, retailers and the consumer showing a disposition to become so disturbed that an intelligent outlook to the future under the new conditions has just recently been possible. Conferences have been numerous in Washington between industry groups, including labor and management, seeking to evolve the best way out of the crisis and one that would prove the least painful to the economy of the country as a whole.

But up to the present the question of "Bread or Bullets" has been almost unsolvable for the full-fashioned hosiery trade and indications are that notwithstanding the remedies that have been offered and ones still to be offered, full-fashioned producers are going to have a painful period of several months ahead, probably six at least, before they can make such a momentous adjustment of their affairs which includes their machinery, from producing all-silk lines to the output of rayon, lisle or whatever substitutes are decided upon in view of conditions as they develop. In addition, they will have to make major changes in their merchandising policies as it is probable American women will have to be taken into partnership in the new scheme so that the movement has the fullest co-operation from the wearer of such hose.

There has been discussion that American women will not be easily sold on the substitute hose but most feel when they learn that such lines are imperative to aid national defense, as the acts of the Government have indicated, there will be a public acceptance of the substitutes in the widest sense. Therefore, the problem goes back to the manufacturer and the ability of the cotton, rayon and other yarn suppliers to develop and deliver to full-fashioned mills substitute yarns in sufficient amount to permit mills to supply the American women with approximately the same amount of hosiery as when manufactured from silk.

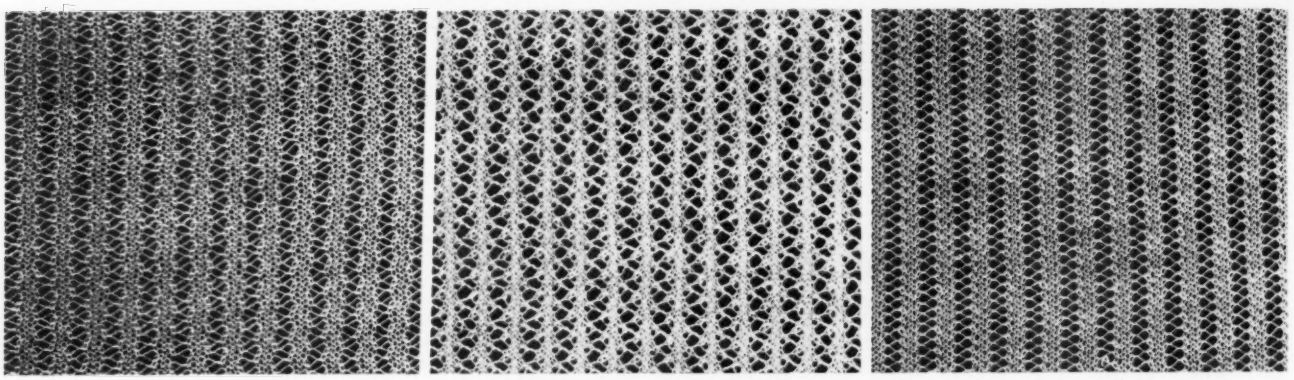


This and the other hosiery and fabric illustrations show some of the many designs for cotton full-fashioned stockings developed by the Bureau of Home Economics, Dept. of Agriculture.

The hosiery industry is well known to be the largest consumer of raw silk from Japan, its takings being recently 90 per cent of all of this commodity used in the United States. The amount has shown signs of declining recently or since the introduction of nylon but the percentage remained about the same. It has been estimated that there is in the country enough silk to last the industry at its recent consumption rate slightly less than three and a half months without taking into consideration stocks of finished hose in the hands of retailers, wholesalers and manufacturers so that the future supply, assuming no more comes in, will be little help to the industry in planning its course over the coming six months or a year.

Nylon full-fashioned hosiery shipments have been expanding so that in the last industry report they accounted for slightly more than 20 per cent of the total shipments of such hosiery with this percentage scheduled to expand further under previous normal silk conditions but now more rapidly in view of the emergency in silk and Government co-operation in expanding nylon production. This means that as nylon production is permanently expanded silk will no doubt lose the American market by that extent irrespective of what happens to Japanese-American relations in the meantime.

Aside from nylon, American hosiery manufacturers will have to depend upon two other type yarns if they are to keep their mills operating on anything like a normal basis. These two are cotton yarns in the finest counts and rayon. In all the discussion few have recommended that wool hose production for women be greatly expanded. Great hopes were at first held out that women could aid in the emer-



Here are three of the net and sport stocking designs developed by the Bureau of Home Economics, Dept. of Agriculture, Washington, D. C., to be made of cotton on full-fashioned knitting machines. These hose are to be made generally in 42- and 45-gauge.

gency by using cotton full-fashioned hosiery as made by American mills from American cotton thereby helping the mills at the same time they helped the American cotton grower, but more thorough investigations showed that this expansion in the production of lisle goods even with the help of the Government would not be easy.

Most in the knitting and cotton yarn spinning fields have already come to the conclusion that while the American output of the finest cotton yarns for the manufacture of lisle full-fashioned hosiery can be expanded considerably over the coming weeks and months, only a minor part of the full-fashioned industry's problem can be solved or nearly solved by such yarns. The fact of the matter is that equipment to spin these finest counts of yarn does not exist in quantity to permit the production to expand to take care of poundage of silk that was used by the same mills. Combed spinners on the other hand have predicted that even with the Government aiding them they could not within the next four months produce enough of the finest sizes of cotton yarns as needed for the production of sheer women's full-fashioned hose to take care of more than 20 per cent of the total wanted.

Yet lisle yarns will be an important part of the new program for the full-fashioned industry in which silk held will be used with other yarns as long as it holds out and these other yarns must be rayon or cotton so that the outlook for the immediate future is for the manufacture of silk, rayon and cotton blended full-fashioned. They will have a small percentage of silk and the rest will be rayon or cotton or both and the outlook also is that not much lower prices will be forthcoming on the sheerest lines for the near future at least as compared with silk. With other yarns being used than silk it is also in the cards for coarser gauge full-fashioned machines to play a part in the industry, which in recent years has been in the direction of junking the 39-gauge goods and even 42-gauge in favor of the finer types. This may go in the opposite direction during the silk emergency.

Rayon yarn manufacturers have been ordered by an order of the Office of Price Administration and Consumer Supply, August 4, to allocate 10 per cent of the industry's new production of filament yarn to hosiery and other silk consuming lines, effective that date. This is regarded as the real salvation of the full-fashioned hose industry as long as the supply situation lasts or until high tenacity rayon yarns can be produced in sufficient quantity. The finer deniers of rayon yarns such as 50 to 100 are best adapted for use by the hosiery mills and production of such sizes is adequate to take care of the full-fashioned requirements.

The problem of getting about 32,000,000 pounds annually of such type yarns from rayon producers to full-fashioned mills is a difficult one under the best of conditions. Rayon manufacturers have been unable to keep their customers supplied with enough rayon for many months and now the Government asks that they place a large number of new customers on their books to take about 10 per cent of their output. It means a major adjustment for rayon producers and one that will require the co-operation of knitters as well but there is little doubt that within a reasonably short time American rayon producers will make the adjustments and that full-fashioned hosiery in sufficient amounts knitted from the man-made fiber will be coming off the machines.

It will be hosiery that will prove a good substitute and one that will present an appearance little different from silk. How the consumer will react to it remains to be seen but there is little doubt but that the opportunity will be the means of stepping-up of rayon use by hosiery manufacturers to a higher total and also will probably mean that silk will lose more of this market permanently aside from the nylon gains to date. Rayon manufacturers will develop new type yarns quickly that will meet the situation so that for the long term, the outlook for silk in the American market is decidedly more unfavorable even though the present situation lasts no more than a few more months. If the emergency as it applies to silk is terminated in less than six months silk would have a chance of holding on to the United States market at least until nylon in due course and any new yarns of the same excellence, came on the market in sufficient volume.

As a stop-gap program, a Joint Commodity Committee appointed at Washington by National Defense officials, recommended to the hosiery industry that they (1) discontinue the manufacture of all-silk stockings, using remaining thrown silk to make stockings of 50 per cent silk and the balance to consist of other than silk or nylon yarn; (2) use half of manufacturers' present supply of nylon to

make all-nylon merchandise and the remaining half to be used in the manufacture of stockings of half nylon and half other type yarn.

Even this did not change the outlook that the immediate salvation of the hosiery trade, at least the full-fashioned end of the business, is the rayon yarn supply that can be allotted to this trade. In line with this demand and the wish of the Government that the rayon industry allot the hosiery industry 10 per cent of its production, du Pont as well as other rayon yarn manufacturers expressed their wish to co-operate fully in this program and August 11 the du Pont firm placed 250,000 pounds of its August output and stock at the disposal of the hosiery industry. Other large rayon firms announced they were obeying the order of OPACS and were placing at the disposal of the hosiery industry 7 per cent of their daily output.

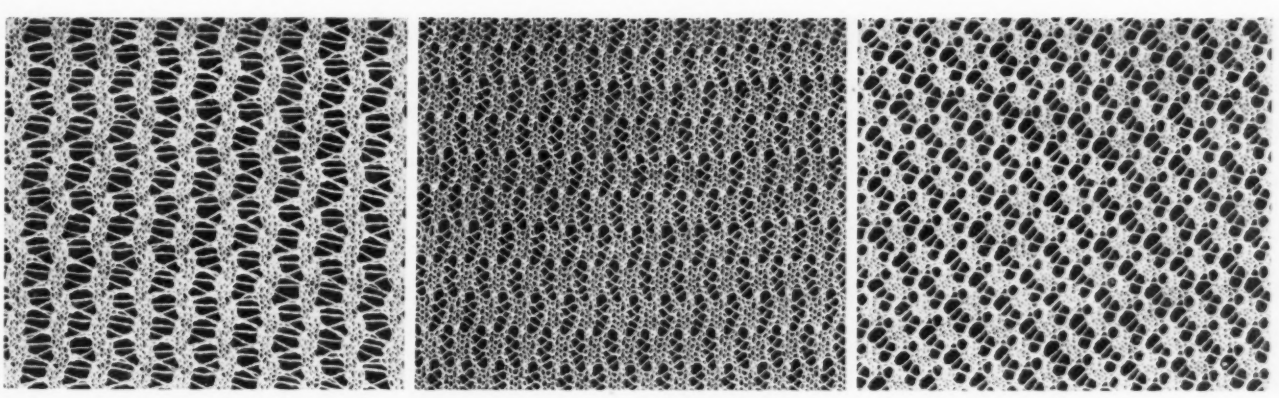
This action made it necessary for some producers of such yarn to cut down somewhat on the allotment of rayon yarns to weavers and there was some confusion at that time as to how the small broad silk and necktie manufacturers should obtain a share of the 3 per cent of rayon production to be alloted to silk manufacturers other than hosiery making the 10 per cent of rayon that is to go to such lines including hosiery under the Government order. In announcing the offering of rayon for August distribution to the hosiery mills the du Pont concern stated that the mills must do so by August 18 and the American Viscose Corporation, the largest American producer of such yarns, stated that OPACS' order for rayon yarn allotment was being followed and that 7 per cent of the company's current output and stocks was being sold the hosiery trade with the other 3 per cent of the 10 per cent allotment going to other former silk users. Similar action was taken by other producers.

The most important steps taken in the silk crisis got under way when, July 25, all Japanese funds in the United States were ordered frozen under an executive order issued by President Roosevelt and shortly thereafter the Office of Production Management ordered the cessation of civilian silk movement with the Office of Price Administration and Consumer Supply fixing the price of raw silk at $3.08 per pound which was considerably under the level that silk had hit during the crisis up to the time that trading on the exchange was ordered discontinued. The crisis had the immediate effect of delaying conferences between the full-fashioned industry and union leaders for a new wage contract in the unionized section of the industry. July 27 trading stopped on the Commodity Exchange in New York. July 29 the first conference on the matter was held at Washington with manufacturers, silk interests and the American Federation of Hosiery Workers in attendance with OPACS representatives.

July 30 rayon yarn manufacturers met at Washington with OPACS to inform the Government of possibilities of aiding the silk trade and OPM began taking an inventory of silk in the United States which amounted to little over three months' supply. The Government was adversely criticized in some sections of the industry as well as in the public press for its failure in recent months to lay up a supply of silk so that the country would have at least enough to bridge it over the transition period when it changed from silk to rayon or whatever yarn was decided upon as substitutes. It did this so that rubber, tin and wool firms had a reserve stock and the question was asked, why did it not do the same in silk?

August 1, the Government announced, following an industry conference at Washington, that no more silk could be processed. August 2 the Government announced the order requiring that 10 per cent of rayon yarn to be made available to the hosiery industry and other silk users hit by the import ban, the announcement being that 70 per cent of this allotment would go to the hosiery field. At this time consumers began to stir and whereas up to that time consumer reaction was lukewarm, now the situation changed sharply and a great rush to retail hose counters began. At present large retailers of the country report that they have been more thoroughly cleaned out of women's silk full-fashioned goods than at any time in their history. Large stores reported early in August that their hose volume was larger by far than their best Christmas trade in the biggest years.

But while the American consumer of full-fashioned hose was buying at retail at a record-breaking pace with an advance in price noted in many sections, which was hit by OPACS officials as unwarranted in view of the ceiling price set on raw silk, the manufacture of full-fashioned by mid-August was dropping off at a dangerous rate, indicating that notwithstand-



Additional samples of designs for cotton full-fashioned hosiery developed by the Bureau of Home Economics.

ing the quick action taken on substitute fibers, there would be a period of transition in the industry. At the middle of the month, hosiery manufacturers were announcing closedowns because they had no silk and no substitute yarns as yet while the American Federation of Hosiery Workers declared that about 25 per cent of the full-fashioned workers of the country already were out of work. The hose union declared also that within a week about half of the 90,000 full-fashioned hosiery workers would be out of jobs unless the mills got working earlier than expected on the new type hosiery.

Operators of more than 16,000 full-fashioned hosiery knitting machines of the industry valued at more than $150,000,000 felt that much of their equipment in the coming months will have to operate in competition with the cheaper seamless hose type. The smaller portion of their machines, about 20 per cent, will have enough nylon and other type yarns to operate the 45 and finer gauge machines, the coarser running on the substitute type yarns that are expected to be available in the coming weeks. Owners of the latest type full-fashioned machines which in the case of 32-section units cost about $20,000, feel that it is uneconomical to operate such machines on the coarser type yarns that are coming along for making women's full-fashioned in the absence of silk. Owners of fine gauge machines feel that nylon represents the only immediate satisfactory substitute.

Early in August leading makers of full-fashioned lines announced that they were selling hosiery on an allotment basis, meaning that a small percentage of orders would be taken from customers on a basis of business that had been previously booked from such firms. Manufacturers were endeavoring to keep prices from rising but the strong demand for goods made this an almost impossible task as buyers demanded goods "at any price".

Running Rayon and Cotton Yarns on Full-Fashioned Machines

By Erskine Root

NOW THAT the course of events has practically eliminated silk hosiery, it is an appropriate time to discuss rayon and mercerized cotton, and their use on a full-fashioned hosiery machine. In this article it is our purpose to explain some of the difficulties encountered when changing over to these particular yarns; though with a little perseverance both can be run quite successfully on any type of flat knitting machine. In fact, we have been informed on several occasions that the imported machines have been designed to run these yarns instead of the general run of high twist silk in vogue in this country. Quite a number of machine finishers from across the water have explained to us that that is one of the reasons there is so much trouble experienced at times with selvages when a new machine is erected.

Irrespective of that, any make of machine should readily take to the yarns we are now forced to use. It is just a question of proper machine adjustment and the right start at the outset of the change-over. As all mill men understand, every machine is different, in some ways, and what cures one is "no go" on the next, or what is necessary on one machine might not be needed on the machine in the same aisle. In our mill we have already been running rayon and cotton on full-fashioned machines for some time and the following are some of our findings.

Cotton. As far as this yarn is concerned, there is really not much to write about except that it takes to a full-fashioned machine without much ado. Good mercerized is just about the easiest thing to run from every angle, or that is at least our contention. Of course, if the machine is equipped with small carrier tubes to accommodate a fine silk yarn and assure ideal running conditions, it might be found necessary to use a slightly larger tube to permit free passage of winder's knots in mercerized. Naturally, this should only be necessary on the finer gauge machines if at all. We should remember not to blame the yarn for breaking and causing a press-off, if our equipment is the cause.

Cotton yarn should be run over a felt pad system such as was used previously for ingrain or boil-off silk. The operators should be given hand bellows to blow off the accumulation of lint which will eventually collect on the pads and all sundry parts of the machine where the thread touches. If this is not done there shall probably be press-offs from a source which is only but natural to cotton, let alone pre-dyed or ingrain silk. Keep the machine free from lint.

We are all aware that cotton very readily absorbs moisture and therefore too high a humidity is not desirable at all, for the simple reason that a cone of cotton which has been on the machine for a few days has taken on moisture that the original package did not possess, thus causing the older cone to run tighter. We have run cotton, rayon and silk in the same knitting room at the same time successfully and found that by just keeping enough humidity in force for the silk, the other two yarns operated quite well. Where just cotton and rayon is being run (including nylon) the relative humidity can be kept at a much lower point than where silk is being used also.

Some very attractive numbers have been made of cotton in the past and we believe this hose shall now come into its own—at a date later than what it was really entitled to. We hope this yarn takes its proper place in the hosiery world for it has latent qualities of which the consumer is not yet aware.

Rayon. Being synthetic, this yarn has a few peculiar quirks to it that are foreign to all other yarns. We might class it as a "wild" yarn, always wanting to get

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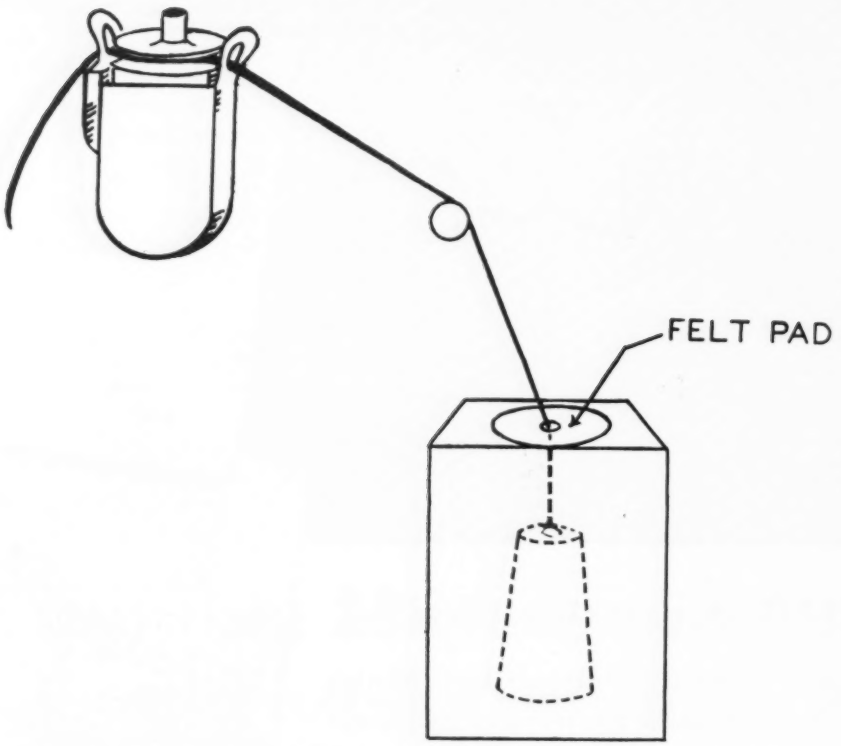


Diagram of moistening and tension device for use in running rayon on full-fashioned machines.

out of control, not only from the time it unwinds from the cone but during the actual forming of the stitch. It must necessarily be controlled from the time the carrier begins its movement; and silk or cotton equipment does not suffice. It is not run through water, and felt pads with just a plain ring tension are not enough to hold it in its place.

At the outset, when changing over to this yarn it is advisable to take a lesson from the seamless end of the industry and install the metal disc system between which the yarn runs, giving identical tension on all cones engaged. Most every mill has an abundance of tension cups, thereby making it possible to get correct tension with very little cost. As shown in the diagram, blocks of wood are cut to fit inside the cups, with a pin in the top over which the discs are placed. This pin is deliberately off centered from the cup eyelets to permit the top disc to rotate while the yarn is being pulled through. Otherwise, we would have a dead pull which is not as desirable as a sliding tension. Hence, there is less chance of "bust holes" or press-offs because of too much drag on the yarn.

In our diagram there is one small felt pad used, this being glued on to the moistening box (with the glasses out, incidentally) under which the yarn runs and up through a small hole in the center of the pad towards the discs. The reason for this small pad is to eliminate snarling of the yarn before it reaches the disc assembly. If some small amount of tension is not used at this point it will be found that the yarn will snarl and loop over anything that happens to be in the way, causing either a press-off or a "bust hole" in the fabric. As conditions are different in other parts of the country we have not mentioned the weight of the discs, this must be determined according to the denier of the yarn in use and the speed of the machine. Our suggestion is to get discs of different weight and after careful elimination use the weight which gives the best results. They can be obtained from any manufacturer who makes parts for the seamless industry, and they usually have a supply of various weights on hand.

The Loose Course

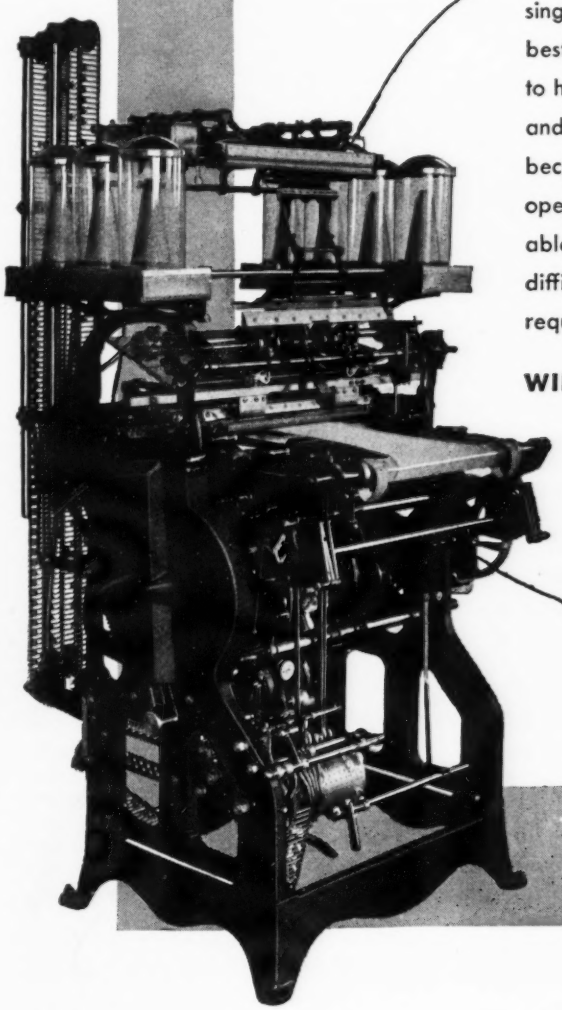
On some machines it will be found that we lose stitches when the loose course cam has been in operation, sometimes not enough for the operator to realize the machine needs attention and then again there will be a chronic dropping of stitches which is detrimental to good operation. It was our good fortune to make a loose course welt style which brought to light immediately the excessive dropping of stitches. If this had not been the case there no doubt would have been picot holes of an origin beyond the control of the operator. Quite naturally the cause of these holes would have been longer in coming to light.

Some machines acted up worse than others and some not at all, due to conditions beyond control, or just the plain difference from one machine to the other. At first thought it might seem as though there was not enough press on the machine, etc., but as long as the stitches were dropped only while loose coursing and the rest of the knitting motion functioned properly there was but one place to eliminate the trouble and that place was on the loose course cam itself.

We found that by building up the loose course cam (see sketch) we did away with our difficulties very nicely. By building up the cam at this spot it can be seen at once that we held our pressure a little longer so as to allow the needle beards to accept the enlarged loops. We do not suggest any particular height to build up to, it all

Sketch of loose course cam for full-fashioned machine on rayon.

The IDEAL Machine To Handle Fine Count Silk Substitutes!



The fine count silk substitutes present many production problems to the hosiery manufacturer. Uniformity in appearance, and good matching of legs and feet are more difficult in these finer gauges . . . resulting in more rejects and seconds. The Wildman single-head, single-unit full-fashioned machine is the best possible solution of these problems. It is designed to handle the finest gauges with absolute uniformity and it assures a perfect match between leg and foot because the entire stocking is knit in one continuous operation. Now is the time to learn how this remarkable machine can help to overcome *your* production difficulties. Complete details will be sent to you upon request, without obligation. Write, wire or telephone

WILDMAN MFG. CO., NORRISTOWN, PA.

WILDMAN

Single-Head, Single-Unit Full-Fashioned Hosiery Machine

depending on the type and condition of the machine in use. (We did this on nylon also).

Caution should be exercised to avoid getting the addition too high for if this takes place it will have a tendency to throw the catch bar because of too much pressure. One machine should be experimented with and a happy medium achieved between not quite enough and too much. Even after this it might be found that certain machines will not take the same amount even though the catch bar is setting exactly like the experimental machine. The only thing to do then is file a bit more off the build-up until we have good operation. Regular bronze welding rod is good enough for this purpose and it is easier to shape to the contour desired.

Holding the Loop

On the particular style we run, a split heel and sole, there was trouble at the dividing point. The rayon loops would slip up and over the throats of the dividers. Once again it was a question of more pressure at just one certain point and we found it necessary to bring out the bits or plugs on the regulator cam. More press would have helped but this would have caused the loops to hang on the ends of the sinkers and the dividers, thus distorting the stitch at a point where only excessive knock-over would half-way rectify the fault, though we did find it necessary to bring the knock-overs to a higher level regardless. By using the regulator cam as a medium for more pressure we did nothing to throw the rest of the regular knitting motion out of balance. Incidentally, while the bringing out of the bits on the regulator cam eliminated our trouble in the splicing it did not remove the trouble with the loose course.

Carrier Tubes and Sinkers

If the carrier tubes and sinkers are rough or worn they are quite apt to cause "bust holes" that have the appearance of coming from machine faults. The yarn will break momentarily, on many occasions causing a hole two inches wide, especially while loose coursing. We found it essential

Another cotton full-fashioned design.

to re-tube as soon as possible except on the splicing carriers, which, traveling slower, did not cause as much grief from this source.

Rough sinkers should be tracked down and dispensed with immediately, their presence will be apparent when a stocking presses off at one certain width of construction either chronically or periodically.

The Narrowing Motion

Rayon does not take too kindly to fashioning at times, having a tendency to break out during the delivery of the stitch. Bent fingers will invariably fail to work properly though they might handle silk efficiently, the reason being that silk has much more elasticity. If the narrowing fingers do not come out at the right pitch they break the loops. Points that are pulled too far forward also must be corrected. After some experimentation we have found that most of the "bust holes" in the narrowing are caused by excessive pitch, either on the whole narrowing machine or an individual finger. Enough pitch to the fingers to pick up the stitches efficiently is all that is necessary although this must be left up to the fixer to determine. Narrowing machines set too far back will also give trouble of the same kind. If there is anything of this sort experienced our suggestion is to try swinging out the narrowing machine on the top and back on the bottom.

Seaming and Looping

There is very little trouble at the looping end so we shall skip over it. Less tension is needed on the seamer and there are less stitches per inch because the work draws together. If cuts in the work occur attention should be given to the distance the needle comes forward in relation to the feed cups. A needle that is slightly rough will also cause cuts.

The seaming operator must be careful not to hold the work too high or low in the guide for there is great danger of the seam bunching. Having little or no "give", rayon must be handled very carefully during this operation.

Word of Caution

As with many other good things, however, record keeping may easily be overdone. Unless he is careful, a supervisor may become more of a clerk than a supervisor.

Once a record is started there is a strong temptation to keep it running. Before starting to keep any kind of records yourself, no matter how simple, ask such questions as these:

1. What will this record show me?
2. How often will I have practical use for it?
3. Is the same information being kept elsewhere so that I can refer to it easily?
4. Will this record save my department money?

The navigator needs his charts to steer by. You, as a supervisor, need certain simple records by which to steer your department. However, do not start a record unless it is absolutely essential, and do not keep making a record one day after it loses its usefulness.—*"Management Information", Elliott Service Co., Inc.*

A Supervisor's Duty

A supervisor has a large responsibility for his employees. They spend one-third of their lives on the job.

They want to be treated as the supervisor would want to be treated if their positions were reversed.

Think of this in your day to day contacts with them.—*"Management Information", Elliott Service Co., Inc.*

U. S. Navy "E" Insignia (twice size) awarded employees of Textile Machine Works for outstanding production of Naval Ordnance materials for defense.

Posed for sheer loveliness... Every woman knows that the sheer beauty of her stockings is in the quality of the fabric. Every hosiery manufacturer knows that money invested in good needles pays big dividends in better knitting results. Keep your knitting machines young and effective with TMW Needles.

TEXTILE MACHINE WORKS • READING, PA.

U. S. Navy Ordnance Flag and "E" Pennant awarded Textile Machine Works for outstanding production of Naval Ordnance materials for defense.

"Some will not look at the new moon, out of respect for the old one"
JERROLD

Regardless of the fibre used, the new READING 30-section 51-Gauge Full-Fashioned Knitting Machine produces 104 per cent more volume and 156 per cent more value than ordinary 20-section 42-gauge machines . . . . *And remember: Money invested in modern machinery serves as insurance for your total investment.*

TEXTILE MACHINE WORKS • READING, PA.

Changes on Seamless Machines to Run Rayon and Cotton

By Albert T. Russell

THE SUDDEN and drastic changes in the silk situation have no doubt upset a lot of plans in many seamless mills, however, the predicament that they find themselves in would be much worse if the present situation were reversed. To begin with, there are no unusual difficulties in changing most seamless machines over from silk production to combed cotton, mercerized, rayon or rayon plaited over cotton. Some minor problems will come with every change but we in the seamless mills have learned how to handle these in years past when some of our machines were running on these various kinds of yarns at the same time and we were constantly changing back and forth from one yarn to another.

There will be some mills, of course, which have been running on silk only for a long time, and to these plants the sudden change will look like a monkey wrench thrown into their machinery and a black-out on their plans for the immediate future. We shall attempt to throw some light on the various problems which will present themselves in various departments and different operations throughout the seamless mill that must change from silk to one or more of the available yarns.

The Knitting Machines

It matters little whether we have Banners, S. & W., Standard, or Komet, machines; they can be made to produce combed cotton, mercerized, rayon or rayon plaited goods just as efficiently as they have done on silk numbers. Each of these distinctly different types of machines possesses an abundance of flexibility and was built to do the job at hand.

In the children's anklet and men's hose divisions there will be less difficulty in changing over than in the ladies' seamless end. Fortunately, the latter is by far the smaller in number, but this fact does not cheer the mill that has most of its production on ladies' work.

The big problem for some manufacturers, especially those making ladies' hosiery, would be whether or not the equipment they were using to produce silk goods would be suitable for mercerized cotton, rayon or rayon plaited goods insofar as gauge, diameter and number of needles are concerned. For example, let us assume a half-hose mill was using silk on a 240- or 260-needle split foot Banner machine—such machines could readily be changed over to all mercerized or rayon leg and instep with mercerized top, heel, toe and sole. The same would be true of a mill making 70-gauge silk anklets, say out of 8-thread silk for leg and foot with mercerized or rayon and cotton twisted heel and toe. A 70s/2 or 80s/2 mercerized for leg and foot would make a fine 70-gauge number on these machines. Rayon and cotton plaited in suitable counts would also fill the bill.

Any Komet machine running on silk can readily be changed over to other types of yarns without delay or changes in equipment, and no out of the ordinary problems would present themselves.

The seamless ladies' hose situation presents a different and more difficult problem. Here we have 300- and 320-needle Model K machines which were built to produce fine gauge silk numbers—3- and 4-thread leg and foot with somewhat heavier heels and toes. Changing these machines over to mercerized, rayon or rayon plaited numbers would be more difficult due to the fine counts of yarn necessary to equal the silk counts previously used.

Nylon would, of course, make a fine substitute; whether or not it can be obtained presents another problem.

It is entirely possible that these fine gauge ladies' hose machines would stand a reasonable amount of *loading* so that heavier counts of yarn could be substituted for silk. The only other alternative would be changing cylinders to coarser gauges and this would mean quite an item of expense for equipment which may be hard to get in a hurry under present conditions.

One thing is certain. Any machine, regardless of make, which has been in good enough shape to run on silk numbers, will be mechanically in good enough shape to run any of the substitutes available.

Things to Keep in Mind When Changing

In changing from silk to combed cotton or mercerized numbers bear in mind that cylinders, inside and outside sinker rings will have to be cleaned more often due to lint packing in various places, which in time will cause trouble. Do not attempt to run as much tension on cotton, mercerized or rayon yarns as you would on silk; just enough tension to steady delivery off the cone will suffice and give best results. Sinker settings can be deeper on all silk numbers—silk will stand the pressure while cotton, mercerized or rayon will not.

Check the holes in yarn fingers as they are likely to have been cut by silk and the gaps will cause a press-off at every knot when cotton or mercerized is run.

In making rayon plaited over cotton numbers (with no previous experience) on Banner, S. & W., or Standard machines, keep the rayon and backing yarns well separated at the feeding point; if at all possible use one finger for the cotton yarn and run it across the corner of the throat plate; use another finger for the rayon. Run the rayon across the throat plate about ¼-inch from the cotton towards the center of the throat plate and keep the throat plate set

as near to the needles as possible.

Run a fair tension on the rayon and no tension on the cotton and pay particular attention to keeping needles in perfect alignment. These suggestions will help assure good plaiting and prevent the rayon from being sheared off or becoming fuzzy by latches closing. Rough needles and sinkers will show up as bad on rayon or rayon plaited numbers as they do on silk, and sometimes worse.

The finishing department usually raises sand when they find needle lines or vertical streaks in silk numbers. They must be particular due to the price bracket. Streaks should also be kept out of mercerized or rayon plaited numbers by the fixer without constant complaints. The better the quality of your goods the easier they will sell.

Silk goods must be knit tight in order to allow for boil-off. Some mills size silk on a half size smaller sizing board. Combed cotton and mercerized yarns must be knit on the loose side to allow for shrinkage in finishing. Straight rayon or rayon plaited numbers will also vary some; the best plan when changing is to put through several size tests so that the fixer can get some quick information on his sizing and make changes accordingly.

In setting up standards or arriving at how many courses per inch to knit on cotton, mercerized or rayon plaited numbers, bear in mind that the *finished* product should have a reasonable amount of elasticity. Overloading with heavy yarn or knitting too tight will kill the stretch; skimping on a few courses of yarn may mean the difference between a good piece of fabric and a sleazy rag.

Knitting Machine Lubrication

Knitting machine lubrication is one of the problems which confront us at all times and extra precautions are necessary in changing from silk to cotton, mercerized or rayon plaited goods. The reason is simple enough; oil spots on silk fabric will come out in the boil-off more readily than on other types of yarns. On cotton, mercerized or other types of yarns the oil spots stay put and mean redyes and in many cases a large percentage of seconds. This is costly to the mill from every angle. The place to control it is (unfortunately for the boss knitter) in the knitting room. Knitters, helpers and fixers must be on their toes constantly or everything will not be *oil* right.

The Looping Department

Most half-hose mills making silk numbers would be using mercerized for heel and toe; silk anklets would have silk or rayon and cotton twisted for heel and toe yarns. This would mean little or no change if mercerized or rayon numbers were substituted for silk. Again we come to the all-silk ladies' hose problem. Most operators as far as the looping operation goes could readily loop mercerized as well as silk. The more difficult problem would be whether or not a machine suitable for fine gauge silk numbers would handle mercerized if the count of yarn used is somewhat heavier than the silk count.

It may be necessary to change say from a 30-point dial to a 28-point. However, my opinion is that the looping machines would handle what the knitting machines could produce.

Inspecting and Mending

Any operator who has been inspecting silk goods can readily switch over to substitutes without much delay. The operation varies little, being more or less universal and not affected to any great extent by the kind of goods being handled. The type or kind of imperfections to be looked for would, of course, vary since each distinctive type of fabric has its own peculiarities; this, however, would be a minor problem inspectors would soon become accustomed to on new types of goods.

Mending all silk numbers is more difficult than mending cotton, mercerized or rayon combinations. Much depends on how the mended goods are classified and the price they will bring. Even a fair mender on silk goods should be able to do an excellent job on substitutes.

Dyeing the Goods

Now we come to a more difficult problem and one which must be understood thoroughly and where past experience will be a big factor. Most hosiery dyers today have had experience on all types and are handling all kinds of goods. Stopping on silk production would simply mean cutting down in one place and building up in another. Some, however, may have been handling silk only for a long time; they would profit by getting facts, figures and formulas from a man who knows cotton, mercerized and rayon dyeing problems.

The trade today demands a great variety of shades getting them right is a long shot from what it used to be not too many years ago. Fortunately, for the dyer, he can buy much of his stock in trade canned like the modern housewife but even then there is much to be done. Most dyehouses should be able to carry on as far as equipment goes without making any unusual changes.

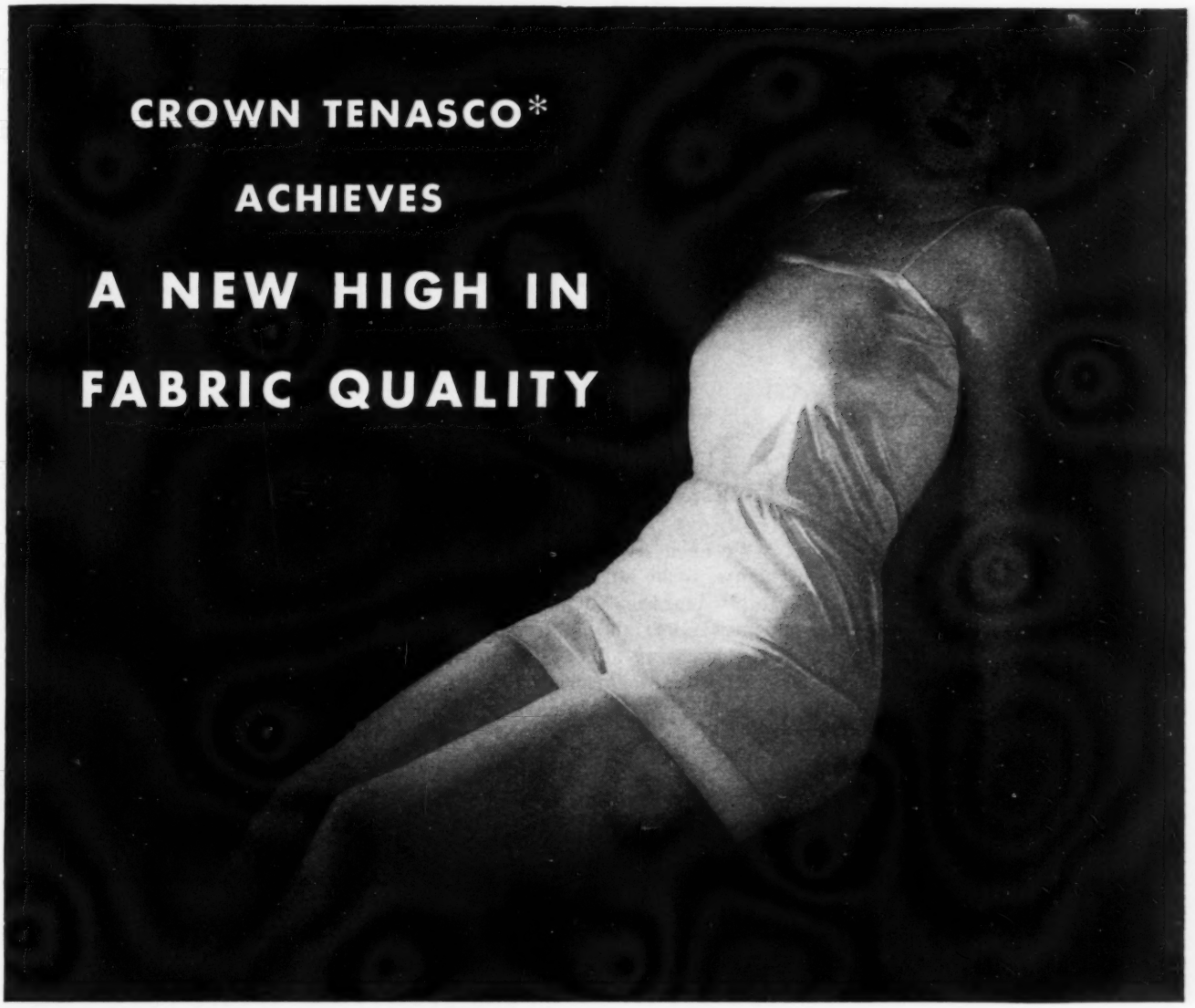
Boarding and Finishing

In the boarding and finishing departments there would be no hardships in mills which have been producing silk goods as well as mercerized or other types,. Boarding forms used on silk goods would be satisfactory for substitute yarns. We have seen some mills getting by with mercerized goods on forms which would be unfit for silk goods.

The boarder, of course, can do little if goods are not knit to fit properly. On the other hand, a sorry boarder can ruin the appearance of goods that are knit right. On silk goods the boarder has little chance to even up goods which vary in length; on mercerized, cotton or rayon plaited numbers much depends on the boarding operation. Most boarding departments would perhaps welcome a change from silk to mercerized goods since the latter requires less care in handling.

Finished inspection, pairing, stamping, etc., are all hand operations and changing from one type of goods to another should cause no serious problems in these operations. As a rule finishing rooms can handle cotton, mercerized or rayon plaited numbers

(*Continued on page* 144)



NEW UNDERWEAR IS KNIT FROM THIS EXTRA-STRONG RAYON YARN

Underwear manufacturers are quick to seize every opportunity to produce better-quality, longer-wearing garments at prices the consumer can afford to pay. That's why, when Beaunit Mills recently introduced a Crown Tested fabric knit from Tenasco, Luxuray lost no time incorporating that fabric in a new line of ladies' underwear.

Tenasco, because of its high strength, gives this fabric the stamina needed to withstand hard service. Yet strong and durable as it is, this fabric is sheer, absorbent, and luxuriant to the touch.

This is another example of the way progressive textile producers are putting extra quality in fabrics by utilizing the extra strength of Tenasco. In some cases it has been possible, with this extra-strong yarn, to create new fabrics for new markets . . . fabrics with qualities that were heretofore impossible to achieve.

HAVE YOU A FABRIC IDEA that calls for a stronger rayon yarn? Perhaps it's a new construction . . . or the improvement of one of your present fabrics. Whichever it is, it will pay you to get the facts on Tenasco. Write today for complete information.

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Preparing the Mill for Winter

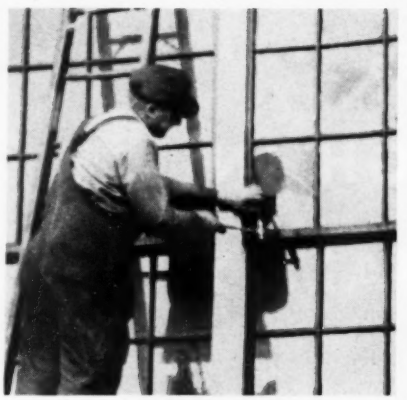
THIS is the time of the year when many mill men find a lot of odd jobs which should have been done **before** cold weather set in. It is an annual occasion because every summer we find many jobs which can be put off until fall, but usually fall has come and gone, and the jobs are still waiting.

In making a preliminary survey we find a few window panes missing or partly broken out. The operatives have stuffed rags in the holes or have fastened cardboard over them with the first cold spell. Some leaky steam line connections in some parts of the mill will be taken care of by buckets to catch the drip. And very common are shut-off valves that are simply a short piece of pipe in the middle or on the end of a line because they don't shut-off. Not unusual among left-over summer jobs are bad steam line traps, leaks on boarding form lines, etc., which have not been used during the summer and early fall.

If the mill has automatic temperature control devices, they should be checked before cold weather sets in to see that they are set properly. If the mill has no automatic control for temperature, and if this is left to one of the supervisors, he should be cautioned to be on the job.

The boiler itself and other boiler room equipment will need some attention because the fall and winter seasons are times when the dye-house and boarding room are pushed to capacity, and this means more steam will be needed for regular operations. Steam used for heating the mill is simply an additional load, and every dollar spent for fuel will have to give dollar value in steam.

Wear and tear on windows and doors will let in a lot of cold air. Even steel sash window frames must fit snugly and lock tight when closed. Cold air leaks in windows and doors will reduce room temperatures from 5 to 8 degrees. Heating the county instead of the mill is mighty expensive.



We need fresh air in all departments, to be sure, but anyone can tell when the air in a room becomes sluggish or actually foul. Do something about it because operatives cannot work efficiently if they do not get plenty of fresh air.

It should be remembered that sudden changes in room temperature are dangerous, especially where delicate machines are in operation. Keep this in mind when opening windows in cold weather.

One of the most costly methods of conserving fuel is to let the whole mill practically freeze up over the week-ends, and then bring up steam about 2 o'clock Monday morning and try to run the machinery by 6 o'clock. The room temperature will be 75 degrees and will feel warm, but four or five tons of cast iron and steel standing around in the form of knitting machines, ribbers, etc., will not be warmed up sufficiently to operate properly. We have seen knitting and rib departments trying to run on Monday morning with temperatures of 65 degrees, and the alibi was "some trouble" with the boiler, or a pump "decided to quit", current was off, stoker out of order, etc., etc.

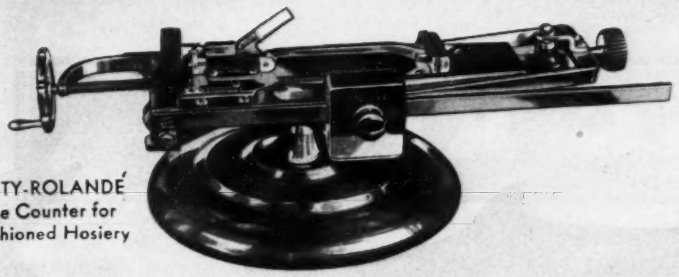
All of the foregoing things are possible, hard luck if you prefer, possibly carelessness, ignorance or laziness on someone's part. Every machine fixer knows that knitting machines will not run properly with room temperatures less than 75 degrees F. 80 degrees is not too high for some of the late model complicated ribbers and knitting machines. The machine fixer has little respect for the foreman, superintendent or other official who asks him to run machines when they are cold. He knows better—give him the service he has a right to expect. Remember, heat is just as important as yarn or needles.

On the other hand it is the duty of every employee to conserve heat, light and power. The mill will gladly furnish these things for legitimate use; unnecessary waste is costly to both the mill and the employees.

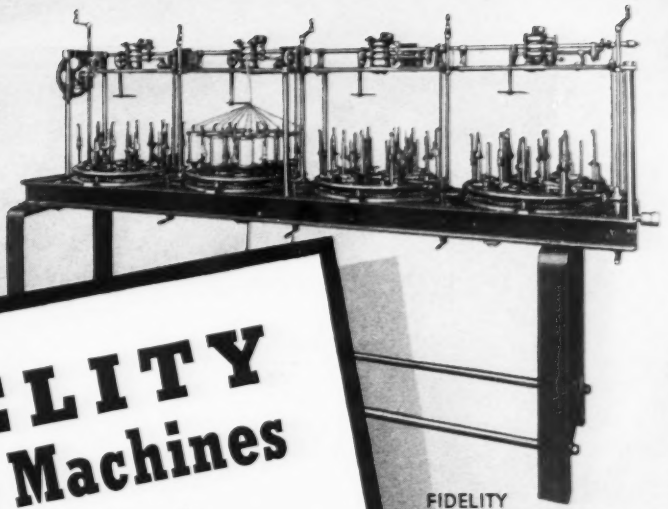
Many employees think "why should I worry about heat, light, power, waste or seconds, the company has plenty of money." It might be well for them to remember that the company can only have what each employee helps to make; the security of every job in the mill depends entirely on the combined efforts of every employee, every department and the management. When the company continues to lose money the employees will soon lose their jobs.

If I Were Boss

IF I were boss I would like to say:
"You did a good job yesterday."
I'd look for a man or a girl or a boy
Whose heart would leap with a thrill of joy
At a word of praise, and I'd pass it out
Where the crowd could hear as I walked about.
If I were boss I would like to find
The fellow whose work is the proper kind;
And whenever to me a good thing came,
I'd ask to be told the worker's name,
And I'd go to him, and I'd pat his back
And I'd say, "That was just wonderful, Jack!"
Now a bit of praise isn't much to give,
But it's dear to the hearts of all who live;
And there's never a man on this good old earth
But is glad to be told he's been of worth;
And a kindly word, when the work is fair,
Is welcome and wanted everywhere.
If I were boss I am sure I would
Say a kindly word whenever I could;
For a man who has given his best by day
Wants a little more than his weekly pay:
He likes to know, with the setting sun,
That his boss is pleased with the work he's done.—*"The Yarn Carrier", Textile Machine Works.*



FIDELITY-ROLANDÉ
Course Counter for
Full Fashioned Hosiery



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Here are machines to back you up in your defense and regular production schedules.

Write for new bulletins on the machines illustrated here.

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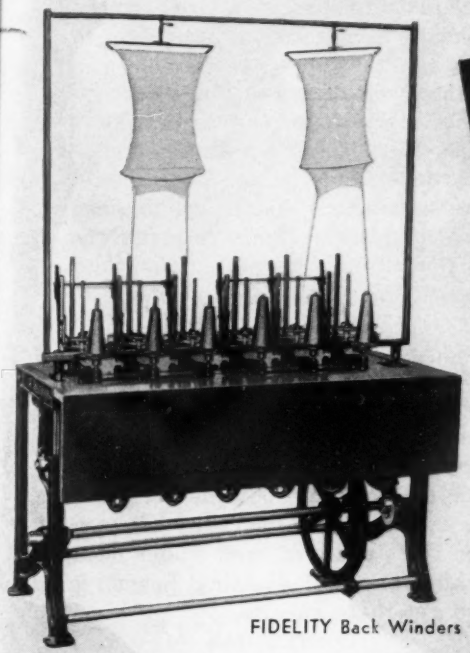
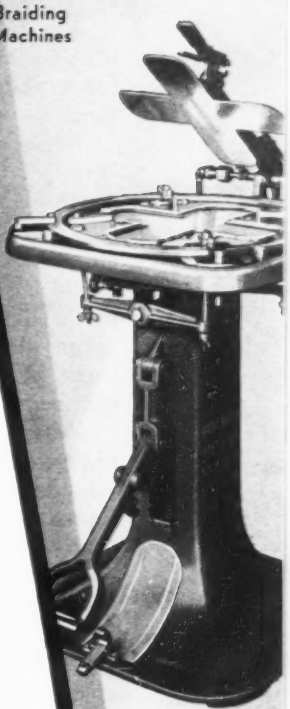


FIDELITY Back Winders



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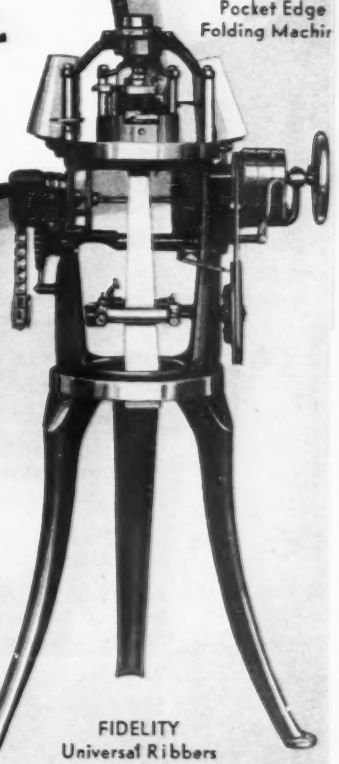
Folding Machir

FIDELITY Jumbo
Bobbin Winder



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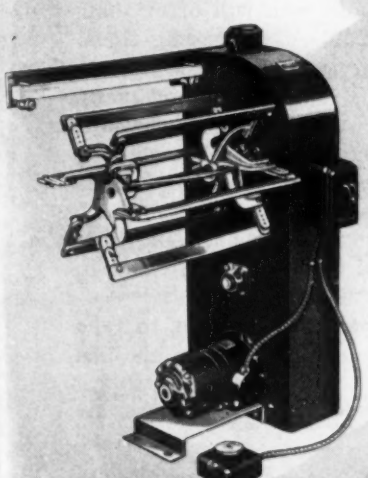
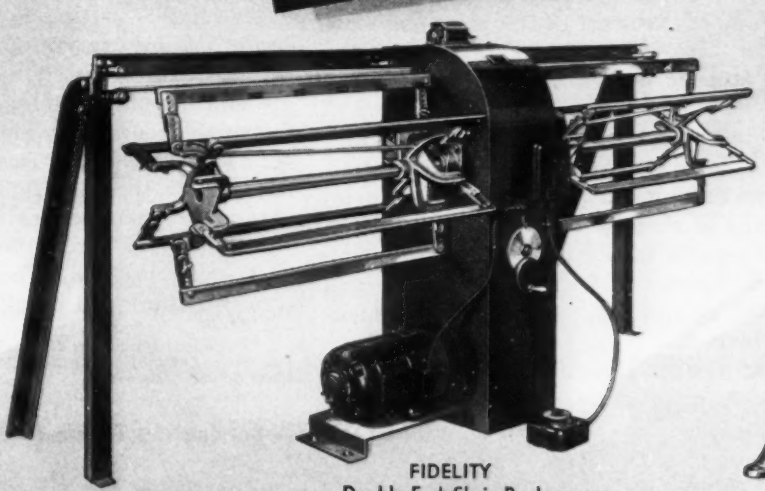
Universal Ribbers



FIDELITY
Single-End Skein Reeler



FIDELITY
Double-End Skein Reeler

KNITTING KINKS

Verge Plate Settings

EDITOR COTTON:

I note that "CONTRIBUTOR NO. 6957" in "KNITTING KINKS" in a recent issue of COTTON wishes advice as to what kind of verge plates are the most satisfactory, stating that he knows there are several types, such as plates with holes in them, others with slots, and still others with composition face.

For the contributor's information, I wish to say that for the past several years we have been using verge plates with a composition face and have found them to be the most satisfactory plates to use.

Some years ago when we first learned about verge plates with the composition face, we secured a set of these plates for a test. In testing these plates we placed them on a machine that broke more sinkers than any of our other machines to see if it would help in reducing the breakage. On the other machine in the same alley we put on a new set of verge plates with a solid face or in other words these plates were the same as originally came with the machine when new.

After a six month's trial we took off both sets of plates and found that the solid face plates showed considerable wear, whereas the composition face plates practically showed no wear at all. We also found that sinker breakage had been considerably reduced on the machine with the composition face verge plates.

The contributor also asks if the sinker should strike the verge plate square on the face or is there a certain angle at which the sinker butt should rest against the verge plate.

I know that the designers and builders of full-fashioned knitting machines, both domestic and foreign makes, have always realized that verge plates are an important link in the proper operations of a knitting machine and the verge plates of their machines are designed so that they do not give catch bar trouble and at the same time produce good fabric.

It is my opinion therefore, that one should never change the verge plate in design. Whenever it is necessary to re-grind or re-face verge plates, always be sure that the angle of the face is exactly the same as was originally designed by the builder of the machine.

The contributor asks, what is the most satisfactory clearance between the verge plate and the sinker to give the best results in regard to good fabric, wear and breakage of sinkers.

For the best results the clearance should not be less than the thickness of a divider of the same gauge as the machine and never more than the thickness of two dividers.

The proper amount of clearance is a most important factor in securing good fabric and preventing wear of verge plates and breaking of sinkers. Every knitting machine should be checked at least once a month for clearance.

It seems that the customary rule for determining the clearance on any sinker head is to take a hold of a sinker with the pliers and push the sinker back and forth. However, this is not an accurate method and far more satisfactory results are obtained if one insists that a divider is placed between the sinker and the face of the verge plate, and then push the sinkers back and forth to determine the clearance.

Too much clearance or no clearance at all will soon wear the face of verge plates, and also cause sinker breakage, so it is not always a question of the kind of verge plates to use or how the sinkers should strike to get good results.

The best results will only be obtained when a systematic check is made on the clearance between the verge plates and the sinkers of each sinker head of a knitting machine and in adjusting heads, it must be accurate to get these results.

CONTRIBUTOR NO. 7089

Still More About "Specialist Fixers"*

Readers: This is no private argument. If you have ideas or opinions, or experiences to prove your point, take part in this discussion.

EDITOR COTTON:

When I answered "CONTRIBUTOR NO. 7074" on his Specialist Machine Fixer idea I did not think we would work up a private debate; however, since we have, please permit me to answer him again. As this has been possible only through the pages of the Knitting Section of your fine magazine, it is not exactly a private debate so if any other mill men will offer their opinions on this subject I would enjoy reading them. After all this section is "our section", is it not? I enjoy reading everything in it and have found many helpful suggestions. I have thought many times how grand it would be if we could have a Fixers' or a Superintendent's Convention just as our big bosses do. The old saying, "Two heads are better than one," is certainly true and it is a known fact in our trade that more machines are fixed out of the mill than in it.

Getting back to "The Specialist" I want to take this opportunity to thank the contributor for his nice

*To follow the entire discussion on the use of "specialist fixers", see May 1940 issue, page 134, September 1940, page 123, and March 1941, page 194.

Add SALES APPEAL with beautiful seams

MADE ON THE SINGER 242 HOSIERY SEAMER

All women want lovely sheer stockings with fine, straight pencil-line seams that are fashion-smart, yet have adequate elasticity and durability. The new high speed Singer 242 was especially designed to produce seams of this kind.

The Singer 242 operates with equal efficiency on the most delicate Nylon and silk hosiery as well as on wool, cotton and lisle. It not only produces better seams, which are stitched straight—but is the fastest hosiery seamer on the market today—simple to operate at speeds limited only by the operator's ability to guide the work.

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comments and say that I enjoyed every word of his article. I also wish to apologize for wondering whether he was ever a fixer. I am sure he was and is a very good one, but it is easy to see that the mill methods under which each of us work are as different as day and night.

To begin with, he mentions the word "overhauling" several times. Although overhauling knitting machines is a very important task it should not have to be done more than once a year, and in a well organized mill where every man in charge of a set of machines is a fixer, instead of a needle boy, it shouldn't be necessary to do it that often. Too, usually this is done during a slack season, and, as we all have them, it is possible for each fixer to overhaul his own set of machines for *only he* knows each machine by its individual bad habits and can remedy them at this time. The specialist would be on a merry-go-around if a line man dragged a machine in to him and tried to explain in his unfamiliar terms that this machine was doing so-and-so at such-and-such a time in this-or-that manner. Try it sometime. Actual experience has proved that a good fixer has to be in constant contact with his machines in order to get the best out of them.

Any man who can fix a knitting machine by merely being told it is giving a certain kind of trouble is not a specialist; he's a genius and I'd like to meet that guy. We all know that knitting machines are sometimes very peculiar and temperamental and I feel sure that in his own experience "CONTRIBUTOR NO. 7074" has had a certain machine do something wrong for which he could find no possible cause. After a thorough check up he straightened the machine out and it started up O. K. After several hours of perfect running he decided to check it off as an accident; but several days later it did the same thing again. Would it be practical and efficient then to drag the machine to the shop, taking it out of production, for the specialist to experiment with for several days?

Next, the contributor mentions that a lot of production is lost and the percentage of bad work increased by the line fixer being tied up on a big job and letting the small jobs wait. True, I have seen it done, but not for long. That statement almost shouts, "Lax management!" From the knitter to the front office we are all out for high production with the lowest percentage of seconds and waste. It is a known fact that a good knitter can make a fixer and a poor one can break him. A good knitter will not let a fixer stick to one machine for an hour or two while another machine is standing with a broken needle, nor will a good fixer do it even if the knitter would let him. The knitter learns at the very beginning that rough needles and streaks make seconds and he should stop the machine to be fixed instead of waiting for the finishing room to squawk. It is the knitter's job to inspect and not wait for the fixer to size up to find the defects. It is not necessary to size up more than once or twice a day and it takes but a few minutes for a fixer to size his own set. A lot of mills have one man do all the sizing so I don't think it should even be considered as detracting from the fixer's time. In a large or small mill there may be as many as four or five big jobs at one time. Would it be efficient to have them all standing waiting for one man?

Almost all mills have a head fixer, although in some smaller ones he may have to carry the responsibility of several jobs. He is usually older and more experienced than the average fixer and capable of doing the shop work. It is his duty to come to the aid of a fixer, helping him out by working with him so that in the future the fixer can take care of such jobs alone. After all, a knitting mill is an organization in which each and every employee is working for the same purpose, the output of hosiery, so why not all work together?

There are very few tools necessary to knitting machines too expensive for every fixer to have and they are usually classed as shop tools which are furnished by the mill. A crew of congenial fixers are not averse to loaning or borrowing tools and it is quite common for several fixers to own some of the more expensive pieces in partnership.

In referring again to Mr. Sale, he *was* a specialist. He did only one kind of work and he did it all by himself. When modernization brought bricks, plumbing and electricity it became necessary to call in the mason, the plumber and the electrician who were all specialists in their lines. Mr. Sale was lost for he was no longer a specialist. The hosiery mill specialist, as "CONTRIBUTOR NO. 7074" sees him, must be able to do any and all jobs that are brought to him. This takes him out of the specialist class and puts him on the pay roll as a helper. A large percentage of mills have helpers to do the overhauling work and some of the larger jobs such as making new cams, welding or replacing cylinder walls. He is hired for this job so that the line fixer can put his more expensive time to keeping the machine running at the lowest possible cost. The fixer knows just how he wants a certain job done because he is familiar with that machine and knows what it needs. He shows the helper how to do a given job and by learning first one job and then another the helper becomes so well acquainted with the different workings of the machines he develops into a good fixer and eventually is given a set of machines to keep up. Most mills are looking for just such a man to put on a set of machines. I know of an actual case in one of our best and largest southern mills where a certain fixer was almost a wizard at pattern work but was too good a line fixer to be taken away from the machines.

In answering the few simple questions: "Should all medical doctors do surgery? Should surgeons pull teeth? Should an optometrist treat fallen arches?", I repeat the words of "CONTRIBUTOR NO. 7074." "They are all parts of the human body," and much more valuable and necessary than any piece of machinery. They *should* get "special" attention. Science is forever striving to protect and preserve the human life and body regardless of time or expense, while modern mechanics are looking for speed and efficiency with the eternal cry, "Cut the cost." I see no comparison.

Once again I believe that each and every fixer on a set of knitting machines should be the Specialist, keeping his machines running with the least bad work and repairs instead of "Just the Man Who Comes Around."

CONTRIBUTOR NO. 7107

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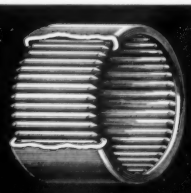

TRENDS AND HIGHLIGHTS OF THE KNIT GOODS MARKETS

Stoppage of Raw Silk Imports Most Momentous Event In Knit Goods—Curtailment Among Full-Fashioned Hose Mills Already Under Way—Union Estimates About Half Workers Shortly Will Be Out Of Work Until Substitutes Become Available—Great Consumer Rush For All Types Of Hose But Mainly Full-Fashioned

Philadelphia, August 16, 1941

FULL-FASHIONED hosiery manufacturers now know what the expression, "Bullets or Bread," means. This was brought home to them in the most forceful way possible when the President late in July stopped the importing of Japanese raw silk, and until the painful transition to other fibers is made these mills, as well as their 100,000 employees, are going to feel this action. There has been considerable tendency in the trade to declare the Government should have seen that adequate supplies of raw silk had been built up first but this is hindsight and always good. The trade had warning for a couple of years the situation between this country and Japanese was dangerous and manufacturers as well as silk importers had adequate time to prepare; they can't hang it on the Government. Other knitting trades are booming with retail demand approaching all time peaks.

Full-Fashioned

The situation in raw silk has brought about the most chaotic conditions that could be conceived in the full-fashioned hosiery trade, not only among the manufacturers, jobbers and wholesalers but among retailers and consumers as well. Manufacturers are curtailing where they have no yarn to run on and in cases where they are running on this basis they are allotting their shipments on the most severe basis that could be imagined. Shipments or orders accepted are based on the amount of goods bought this time a year ago and then some branded firms have been giving out only about 10 to 20 per cent of these. Under such conditions it is easy to see why prices should go up and the wonder is they have not gone up more and faster than they have but the advances already made in retail prices by many have brought unfavorable comment from Federal Price Administrator Leon Henderson who declared that as raw silk prices were frozen there could be no real reason for an advance in silk hosiery prices at this time. Here it is the first time that full-fashioned manufacturers could have made some money in years and now they cannot get silk to take advantage of it nor nylon in sufficient amounts. The mills are making great preparations to turn out hose made of rayon and lisle yarns so that these stockings will be on the counters this Fall unless the Japanese situation clears up much quicker than the whole country feels that it is apt to. There is no doubt but that in the long run it is a very unfavorable development for Japanese silk growers as they may never get back the American market in anything like its former size no matter how the present dangerous situation comes out.

Half-Hose

In the half-hose field there is greater demand for goods for the deliveries wanted than knitters can take care of and knitters are confronted with not being able to place orders for yarns in enough volume to produce all they can. At the same time many knitters claim that the help problem is becoming acute, that they are not able to get extra workers when they want them and in instances have been losing workers who left to take defense jobs at higher wages. As cotton yarns, aside from combed, have advanced and fine count combed as well as mercerized yarns are higher than a month back, manufacturers are revising goods prices accordingly but buyers still want them declaring that it is not so much the price but being able to get goods in time. During the first six months shipments of all types of half-hose increased 25 per cent over the first half of 1940 with the largest share of this being in wool socks, reflecting great demand for such lines by the armed forces, but shipments of slacks increased 30 per cent. Bundle goods shipments spurted almost 50 per cent indicating that industrial workers of the country are fully employed and buying such lines actively.

Seamless

Women's lines are much more active and there is a larger demand for anklets and children's and infants' numbers. Larger buyers have been endeavoring to place orders in these lines far ahead and in larger volume than manufacturers would consider. Prices of all types of seamless have been advancing due to higher costs in the way of yarn costs and labor minima, plus the heavy demand for goods of all kinds. The situation in silk and the full-fashioned end of the business is aiding seamless until in the next six months full-fashioned mills are able to turn out more hose than they expect now from substitutes but on the other hand many feel that the coarser yarns being used on coarser gauge full-fashioned knitting machines will shortly offer the seamless goods much keener competition than for years.

Underwear

Underwear manufacturers are late this year in naming prices on the coming lightweight season. Ordinarily at this time they would have a good idea what was going to come along in the next season but this time there are so many uncertainties in the air that most manufacturers are holding off. The situation is confused by the war and by ceilings that already are on yarns as in combed or expected ceilings such as are predicted for carded yarns in the near future. There have been price advances in the fall goods following a previous advance. Underwear men said one of the increases was due to spinners asking for a surcharge on old yarn contracts running up to 2 cents a pound on some while the other underwear increase came when wages and other costs advanced late in June. Manufacturers are very busy as seen from the rate of June industry shipments of 2,115,637 dozen against 1,548,915 in the same weeks a year previous, which is a substantial increase. The number of machines in operation that month was 11,501 against 9,543 in June of 1940. Goods buyers are inflating their potential needs so that underwear manufactur-

ers will have to allot spring 1942 goods when they take large orders in these lines.

Freezing Of Silk By Gov't. Upsets FF Mills

Full-fashioned hosiery manufacturers have had 80 per cent of their raw material taken away from them by the Government assuming control over raw silk. Recent data indicate that about 20 per cent of the shipments of women's full-fashioned stockings were of nylon with the balance being practically all of silk. August 1, the Office of Production Management ordered complete stoppage of all processing of raw silk effective at midnight the following day in order to conserve supplies on hand for the military branches of the Government. This action was to be felt immediately by approximately 100,000 workers particularly after Priorities Director E. R. Stettinius, Jr., ruled that no person could after midnight, August 2, 1941, throw, spin, or otherwise process raw silk unless specifically authorized by the Director of Priorities. A previous order had prohibited movement of raw silk from warehouses to mills.

The OPM action was taken after the Army and Navy authorities informed the defense agency that minimum military requirements for silk during the next two years will approximately equal the total stocks now in the United States. Government officials bluntly warned textile manufacturers at conferences at this time that the most pessimistic viewpoint of the silk situation must be taken and that while the international situation might conceivably be altered all their calculations should be made on the assumption there will be no more silk. Leon Henderson, Federal Price Administrator, thereupon instructed the New York Commodity Exchange to suspend all trading in silk futures and a ceiling of $3.08 a pound was set which compared with a market price that had spurted to $3.65 a pound prior to the freezing order by the Government.

Hosiery Manufacturers Study New Outlook for Industry

Among the 500 operators of 16,000 full-fashioned hosiery machines valued at approximately $150,000,000 there is concern over the outlook that at least 80 per cent of their equipment will be forced to operate for several months ahead in much keener competition with the seamless machinery in view of the recommendation that the hosiery industry shall turn to substitute yarns which heretofore have been widely used in the seamless hosiery trade. The remaining 20 per cent of full-fashioned machines, all of which are the finer type from 45-gauge up, are now knitting nylon stockings and will so continue unless the Government itself should begin to requisition nylon as a silk substitute. Costing originally $10,000 each for the coarsest gauge type to $20,000 each for the latest 32-section automatic welt turner type, full-fashioned machines represent such a large investment that a sudden switch to the production of all-rayon and cotton or part rayon and cotton would create more competition within the industry. This is due to the fact that the latter types of hose are produced more cheaply on seamless machines.

Stockings knitted of such yarns or mixtures previously had never made much headway in the full-fashioned field even at times when raw silk was extremely high in price or when a boycott of products of Japanese silk was threatened. Full-fashioned hosiery manufacturers at such times would only manufacture a relatively few numbers with rayon or lisle tops and add an all-lisle number as an appeaser for such a movement. Conceding that fine count cotton yarns of domestic or British origin would alleviate their plight, full-fashioned mills see a period of months in which the consumer may prefer to pay less for seamless rayons and cottons than for similar type goods in full-fashioned as it is believed the latter type will have to sell for approximately twice the price of the seamless.

FORECAST

(Opinion submitted by COTTON'S market correspondent)

Philadelphia, August 16, 1941

TEXTILE MANUFACTURERS are entering an era that is new to them, since World War days at least. It is one in which a larger share of the control of their own affairs is to be taken out of their hands and for the emergency at least they will be governed more by regulations and laws of Government. They already are confronted with Government ceilings in many lines, prices above which they cannot sell their goods or prices above which their suppliers of raw materials cannot go. More of this is immediately ahead of us and may affect textile manufacturers much more than they expect at present, such as smaller manufacturers being unable in many instances to obtain enough raw material on which to run and in other instances mills making civilian goods will have to turn over to the production of goods used by the armed forces if they intend to continue to function.

There are indications more developments such as that already existing in the silk hosiery business will be felt. In hosiery the full effect of war economy is being felt and thousands of full-fashioned knitters already have lost their jobs because no silk is available. It is possible that this may later on be seen to a lesser degree in wool goods where the Government needs may make it imperative for weavers to cut down on wool goods or use poorer grade raw material if Government demands expand as expected and the same trend will be felt more and more in knit goods lines as we pass more and more to full war-economy.

Under such conditions manufacturers at this late date can do little not already done to protect themselves. They now are unable to obtain all the yarns wanted for the deliveries wanted; they are unable to obtain all the help that is needed due to competition from war industries that can afford to pay higher rates; they are confronted with priorities which see that raw materials and yarns go first to firms that are working on Government orders. It means unless goods being made fit into the armament drive of the nation that civilian needs must take second place. Yet the country must be clothed and textile manufacturers will function but under drastically changed conditions and with the Government as a controlling partner.

Rayon In Lead As Silk Substitute

Although there has been considerable discussion relative to the larger use of lisle yarns by the full-fashioned hosiery trade, a majority in the industry appear to believe that the bulk of the poundage formerly supplied by silk will fall upon the rayon yarn industry. In view of this rayon yarn producers were summoned to conferences in Washington early in August to discuss the allotment of larger quantities to the hosiery industry. Shortly thereafter producers were directed to allocate 10 per cent of their daily production and 10 per cent of their stock for the hosiery and other sections of the textile industry hit by the shutting off of the silk supplies. There was some confusion when this Government recommendation was made as to whether the 7 per cent of rayon set aside for the hosiery industry included poundage previously allotted to such manufacturers. The same problem arose in regard to the 3 per cent of rayon production allocated to other than hosiery consumers of raw silk.

Following the Washington conferences on this matter it was recommended that manufacturers discontinue immediately the manufacture of all-silk stockings and that they should use their remaining thrown silk to make stockings of 50 per cent silk and the balance to be composed of other than silk or nylon. The same thing would hold true in the case of their nylon

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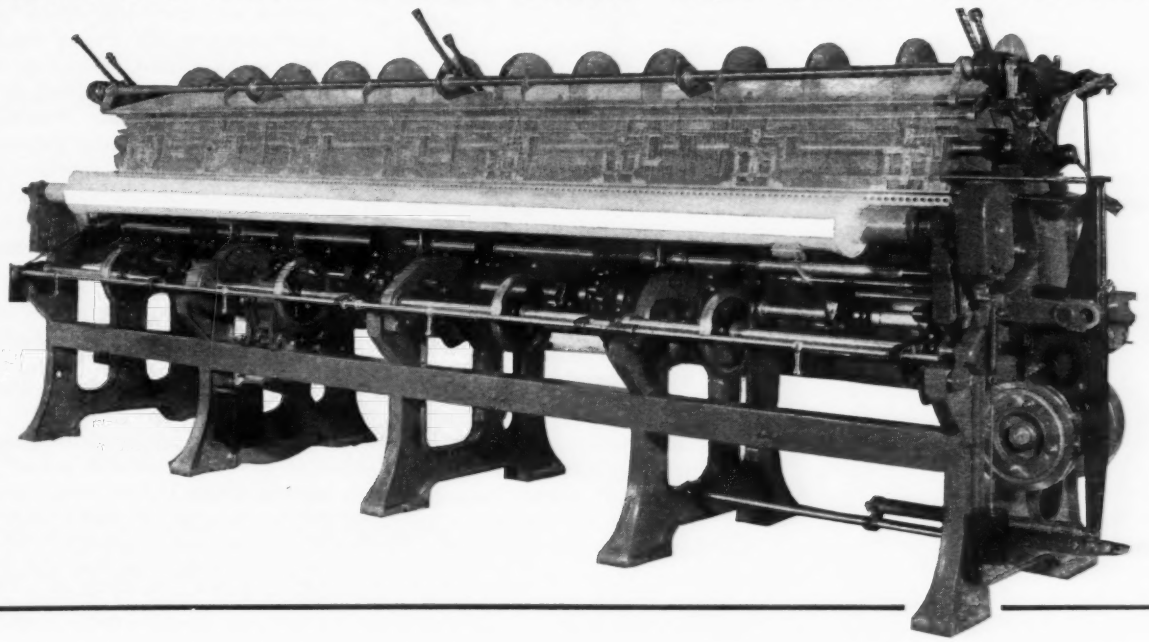

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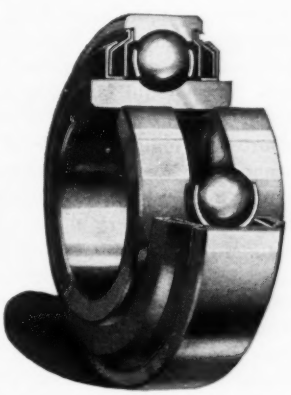

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using half to make all nylon stockings and the remaining half to be used in the manufacture of stockings containing 50 per cent nylon and the balance other yarn. It is expected that the du Pont company will produce enough nylon yarn by the end of this year for as much as 40 per cent of the nation's hosiery and the Government is considering the possibility of that company erecting still another plant to manufacture nylon.

Silk Waste Put Under Priorities

In an attempt to arrest the threatened shortage of silk E. R. Stettinius, Jr., Director of Priorities, August 9 signed an order placing the entire domestic supply of silk waste, silk noils, and reclaimed silk under priority control. The order prohibits the processing after August 9 of waste, noils or reclaimed fiber except to fill a defense order unless specifically authorized by the Director of Priorities. It further requires that no deliveries of silk waste, noils or garnetted or otherwise reclaimed silk fiber be made without authorization from the Director of Priorities. The War Department declared that the threatened shortage of silk will not affect too seriously the supply of cartridge cloth used by the Army. Garnetting is a process for reclaiming silk fiber and silk noils are knots of short combings from silk waste.

OPM Takes Silk Inventory

An inventory of raw silk in this country in the hands of hosiery manufacturers and throwsters on July 26 was taken by the Office of Production Management. Mills were asked to furnish specific information as to size and quality of their silk stocks, silk in transit for their own account and the account of others. It is expected the results of this inventory will determine the percentage of raw silk stocks to be taken over by the Government for defense purposes. Government-held stocks of raw silk were small when Japanese assets in the country were frozen on July 25. There had been some discussion relative to the accumulation of silk reserves for defense purposes but actually practically nothing along these lines had been done according to the understanding in the trade.

FF Mill Operations Drop Off Sharply

At the middle of August offices of full-fashioned hosiery mills estimated that the average rate of operation was down to about 40 per cent of capacity as the industry's thrown silk supply dwindled and the delay in delivery of fine rayon and lisle yarns continued. This estimate of idle equipment was in line with the prediction by the American Federation of Hosiery Workers that about half of the 90,000 full-fashioned workers would very shortly be out of jobs if substitute yarns were not forthcoming. A few mills stopped their output of nylon as well as silk after Government recommendations that such yarns be combined half and half with other yarn. A large number continued to make up silk goods feeling that the amount was so small it would not be worth the suspension of operation. The lower rate of operation among the mills placed the hosiery union in a less advantageous position in its wage negotiations with the Full Fashioned Hosiery Manufacturers of America, Inc., but the union president at the middle of the month expressed optimism that a new wage contract would be reached by the end of August.

Consumer Rush To Buy Silk Hosiery

Fearful that they would not be able to get any later on because of the raw silk situation, consumers have been swamping retail hosiery counters in a rush to buy all the silk and nylon full-fashioned goods that they can lay their hands on. Some of the largest department stores in the country have been reporting that they have recently been doing a record breaking volume of hosiery business, far larger than at any holiday season. Most of the larger retailers were forced to adopt a policy of selling only a certain number of pairs to each customer and many of them sold their merchandise without any indications of profiteering but there were instances where both jobbers and retailers sought to take advantage of the unusual situation and advanced their prices sharply. This action quickly brought unfavorable comment by Price Administrator Henderson who declared there was no excuse for this advance in view of the ceiling that the Government had placed on raw silk.

Hahn Hosiery Patent Is Declared Invalid

The Arthur M. Hahn Patent No. 1,715,323 for reinforcement of the heel point on full-fashioned hosiery was declared invalid by Judge Guy K. Bard in the Philadelphia Federal District Court. He ruled that Hahn's suggested methods lack invention and were anticipated by the prior Lengel art patent. The fact that Lengel stockings is a seamless hose and Hahn's full-fashioned is of no importance, the court ruled, adding that the "Step taken by Hahn has made no new contribution to the art. It was but a trifling improvement over the former art of reinforcement and one which was a spontaneous occurrence in the course of normal development of the art." The suit was originated by Arterraft Hosiery Mills, Philadelphia, against Roman Stripe Mills, Inc., Easton, Pa.

Gov't. To Buy Silk For Army and Navy

In the first step to make sure that the Army and Navy secure the major portion of raw silk stock held in warehouses in the United States, the Defense Supplies Corporation on August 11 agreed to purchase up to 100,000 bales, Federal Loan Administrator Jesse Jones reported. Defense Supplies Corporation is a subsidiary of Reconstruction Finance Corporation and indications are it will buy the raw silk for defense needs at ceiling prices recently set by OPACS.

Offer Rayon Yarn To Hosiery Trade

Rayon producers have announced their willingness to supply hosiery manufacturers with yarn immediately. The du Pont company placed 250,000 pounds of its August output and stock at the disposal of that section of the textile industry and other large producers asserted that they were obeying the OPACS order by making available 7 per cent of their daily output to the hosiery industry. Rayon weavers early in August were uncertain just how much their quotas of yarn would be cut by diverting rayon to the hosiery industry. At the same time temporary confusion existed among small broad silk and tie silk manufacturers as to how they should obtain a share of the 3 per cent of rayon production to be allotted to manufacturers of silk goods other than hosiery. In announcing the offering of rayon for August distribution to the hosiery mills the du Pont company stated that they must have placed their orders not later than August 18. At the offices of the American Viscose Corporation it was also stated that the OPACS order was being followed and the 7 per cent of that company's current output and stocks was being sold to the hosiery trade, with a further 3 per cent awaiting orders for the company to allocate it to other former silk users. Other rayon yarn producers were following the same practice.

Reading Hose Union Asks Gov't. Subsidy

Reimbursement of silk hosiery workers for time lost through the stoppage or curtailment of Japanese silk deliveries to American mills and a subsidy to manufacturers to cover production losses were recommended by Branch 10,

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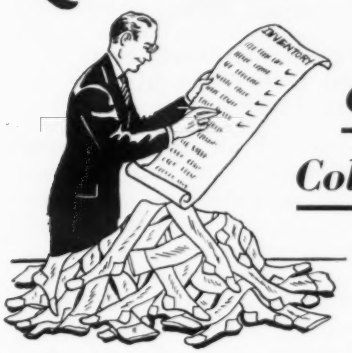

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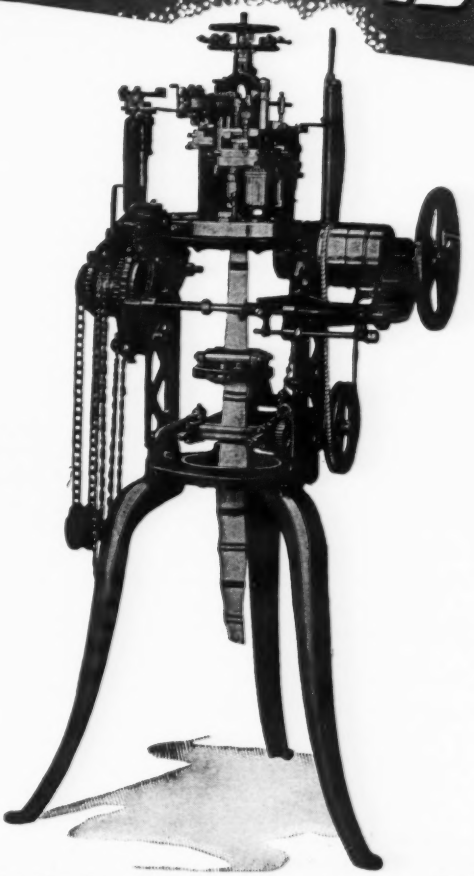

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the Reading, Pa., local of the American Federation of Hosiery Workers. The program suggested direct subsidies to idle workers and to mill owners for idle machinery during the period in which silk imports are shut off in whole or in part. It also urged the adaptation of idle plant space and equipment to manufacture of defense products. This, it was said, would give employment to hosiery workers made idle by the lack of silk.

Imports of Cheap Hose From Japan Cut Off

Imports of cheap cotton and rayon mixed hosiery from Japan were shut off by this Government's action in freezing Japanese funds here. Imports of this kind so far this year had been declining but at the same time were a competitive factor in the low end numbers of domestic men's socks. Several years ago the imports were so extensive in this type hosiery that a negotiated quota pact was arrived at between the National Association of Hosiery Manufacturers and exporters of Japan. For the first four months of this year they totalled only 162,000 dozens which was a sharp drop from the 250,000 dozens in the same period of last year. For several years past the imports of cheap cotton hosiery have been growing from China and have actually been larger than those listed as coming direct from Japan. The first four months of this year showed imports listed from China as 226,000 dozens compared with 322,000 dozen last year over the same months. There have been hints that perhaps some at least of the imports coming from China were actually goods made in Japan and routed through China.

Special Assn. Group Study Silk Problem

A special hosiery committee to study such a problem as that caused by the suspension of raw silk imports has been conferring with Government agencies. The committee was appointed by the National Association of Hosiery Manufacturers and is headed by J. E. Millis, president, Adams-Millis Corporation, High Point, N. C.

In addition to Mr. Millis, the committee consists of Charles Chipman, president, Charles Chipman's Sons Co., New York; Hugo Hemmerich, general manager, Berkshire Knitting Mills, Reading, Pa.; D. K. Chalmers, vice-president, Holeproof Hosiery Co., Milwaukee; J. J. Kronenberg, president, Wayne Knitting Mills, Fort Wayne, Ind.; Nathaniel Judson, chairman of board, Mock, Judson, Voehringer Co., Greensboro, N. C.; N. F. Lahr, vice-president, Cooper, Wells & Co., St. Joseph, Mich.; J. H. McEwen, president, May McEwen Kaiser Co., Burlington, N. C.; and William Meyer, president, Apex Hosiery Co., Inc., Philadelphia. In addition is Irving K. Hessberg, president, Van Raalte Co., Inc., New York, ex-officio, as chairman of the board of the hosiery association.

Underwear Machinery Operating Actively

Machine activity among underwear mills has been at an unusually high rate. Data on both knitting machines and sewing machines reported by the Department of Commerce for June showed the number of knitting machines in operation was 11,501 compared with only 9,543 in the same month of last year. The expansion in production was especially apparent where Government buying was known to have been heavy, for example in the men's heavy shirts and drawers production was several times that of the same month a year previous. Shipments of the same this June were 106,000 dozens compared with only 24,000 dozens a year ago in this same month.

British Spinners Offer Lisle For FF Hose

Fine gauge lisle yarn especially processed and spun for use in the manufacture of full-fashioned hosiery is now being produced in quantity by British cotton yarn spinners and is available to the American market, according to M. Stanley Brown, United States representative of the Cotton Board of Manchester, England, which is a non-trading association centralizing production and export activities of the British cotton industry. Co-operative experiments by American hosiery manufacturers and British cotton spinners have been under way for over a year to produce such yarns, according to Mr. Brown and tests employing selected grades of long staple cotton have resulted in the successful production of lisle yarns as fine as 160s two-ply. He said hosiery produced with these new British yarns are comparable in appearance and feel to good grades of silk stockings, adding that they do not in any way resemble the cotton hose produced heretofore. Retail prices range from 75 cents to $1.15.

Constantine Urges Hose Mills Cut Silk Use

Hosiery manufacturers have been urged by Earl Constantine, president of the National Association of Hosiery Manufacturers, to give their full support to the Government's plan to keep the mills in operation by cutting the silk or nylon content of stockings 50 per cent. Stating that many manufacturers of silk hosiery had never handled rayon yarn Mr. Constantine said the association's research staff had prepared a technical memorandum on knitting hosiery from rayon yarn. (See page 122.) He warned hosiery manufacturers not to purchase rayon yarn beyond their immediate requirements and he also called attention to the fact that the new situation existed in nylon whereby manufacturers were now permitted to use this yarn in combination with other types.

Hosiery Shipments Set Record For First Six Months 1941

Shipments for all types of hosiery for the first half of the year set a record registering an increase of 14.6 per cent. During these months the outstanding percentage gain was in nylon which in the preceding year was just getting started, while the second largest percentage gain was in seamless wool half-hose. Extremely large purchases of the latter type half-hose by the Government was the most important factor in expanding shipments of this type.

Changes on Seamless Machines

(*Continued from page* 130.)

faster and with less trouble than all silk numbers. Most silk goods today are put in transparent bags, which means an extra operation and added expense in more ways than one; this will be entirely eliminated in changing to mercerized or other types of goods.

Changes in the seamless mills will depend to a great extent on the ultimate outcome of the full-fashioned situation and here nylon will play an important part. There are quite a number of ladies' seamless machines running on goods other than ladies' hose; whether or not these will go back to ladies' hose production will depend on how far the full-fashioned mills go with substitutes other than nylon if the silk situation remains as is.

Selling agents are asking for ladies' hose samples now from various mills that have the necessary equipment to make them; whether or not they will make the change will depend to a great extent on the price they can get for seamless ladies' hose, and the cost and supply of available silk substitutes. The whole situation is complicated and very uncertain, and no one can predict its final outcome. Time will always tell.

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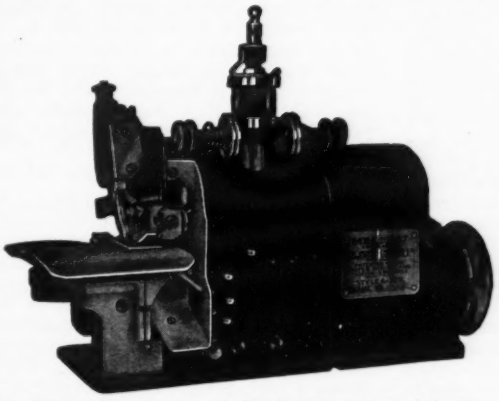

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TRENDS—YARN MARKETS

Government Freezing Of Silk Influences Other Yarn Markets—Cotton Spinners Expanding Fine Count Production and Rayon Yarn Producers Turning Out More For Hosiery Mills As Substitutes—Carded Cotton Yarn Advancing—Worsted Yarns Unchanged.

Philadelphia, August 16, 1941

TAKING SILK under Government supervision has been the most important development in the yarn markets for years, throwing the hosiery trade into confusion such as not seen in memory of traders. At the same time this occurrence has had major effects on the cotton and rayon yarn markets because they are to be used as silk substitutes so far as possible with rayon looked upon as the more important due to the relatively small poundage of finest count cotton yarns that the American and English spinners can turn out. At the beginning of the month OPACS at Washington raised the ceiling price on the finest count combed yarns, some of the numbers being raised more than 20 cents so that spinners now have fair profit margins in such counts but the industry is still pressing for an advance in the combed ceiling in other counts, claiming profit margins in them are insufficient. Mercerizers early in August revises their prices upward to conform to the new Government combed ceiling and this resulted in larger mercerized coverage.

Cotton Yarns

The combed section of the sales cotton yarn market has been operating under a Government ceiling that was placed by OPACS on May 23, 1941, but up to the present time no action has been taken by the price fixing authorities in regard to a ceiling on carded qualities. On June 19 the Government issued an amendment to the combed yarn ceiling changing the differentials on coarse counts to ¼ cent per number instead of ½ cent as outlined in the original ceiling ruling. On July 21 another amendment was issued advancing the ceiling on combed singles 3 cents per pound and on two-ply combed it was advanced one cent so that the Government price of 30s single became 45 cents instead of 42 cents, with other counts raised in this proportion. August 1 another amendment was released by which the finest counts of combed yarns were raised from 11 to 24 cents per pound depending on the count involved.

These revisions in the combed ceiling had been urgently pressed by combed spinners, who pointed out that they were unable to manufacture the finest counts profitable under the former ceiling but many of them expressed the opinion that the Government should shortly revise all counts upward further than was done in the July 21 increase in all counts. But their recommendation has lost some force in the last ten days due to a substantial drop in the price of raw cotton. Shortly after the finest counts were raised on August 1 mercerizers issued new price lists which showed minor upward revisions in the coarse and medium counts and larger up turns in the finer numbers which generally followed the increases previously made in the finest counts of combed yarns. The new mercerized list dated Aug. 5 in the case of one of the largest companies priced 60s/2 ungassed at 91 cents comparing with 88 cents in the previous list but in the case of 120s two-ply the new price list has this count at $2.32 compared with $2.025 in the previous list.

Mercerizers also announced new prices for single yarns with the medium counts mainly unchanged and with 50s to 100s showing increases of from one cent to 18 cents. There has been an exceptionally large demand for cotton yarns from manufacturers with poundage being limited only by the amount of business that spinners would take. At present most carded yarn producers are sold ahead until the end of this year and several have now begun to book orders in a cautious manner for the early part of 1942. Prices of carded yarns have advanced approximately 3 cents a pound in the last month so that some counts have actually sold at higher prices than corresponding counts in the combed. An example of this is 30s single extra carded cones which has sold above the 45 cent level set for the same size in the present Government combed list. There is talk in the trade that a Government ceiling is shortly to be set in carded yarns.

Silk

Raw silk has in recent weeks been passing through its greatest crisis following the freezing of Japanese funds in the United States under an executive order by President Roosevelt, this being followed by the Office of Production Management ordering cessation July 25 of civilian silk movement. Immediately thereafter the Office of Price Administration and Civilian Supply fixed the price of raw silk at $3.08 per pound. These Governmental steps caught the full-fashioned hosiery trade unprepared for any such drastic event and the present stocks of silk in this country in all hands are only sufficient for a little more than three months of our normal needs. Mill deliveries of raw silk in America during June totaled 24,251 bales according to the Commodity Exchange, Inc. This figure compares with deliveries of 22,440 bales in May and with deliveries of 17,307 bales in June 1940.

American mill takings during the season 1940-41 which ended June 30 last reached a total of 333,740 bales which is slightly above the previous season's total of 323,045 bales. However, without exception the figure for the season just ended is the lowest since the early 1920s. As a result of the higher mill takings and the stoppage of imports stocks of raw silk in New York at the end of July dropped to 47,208 bales compared with 53,436 bales a month previous. Just prior to the freezing of Japanese assets in the United States several Japanese vessels hovered off the coast of California with large quantities of silk aboard. The largest of these, the Tatuta Maru, had aboard 15,738 bales which eventually were landed on the dock and within a few hours this large vessel refueled and left for its home port. It is understood that considerable domestic silk will be saved by the Government for defense items only such as parachutes and powder bags.

Rayon

Shortly after the Government took over control of the raw silk in this country industry conferences were held at Washington seeking to find the best substitutes for silk in the hosiery trade and in line with this an order was issued instructing rayon yarn producers to allot the hosiery and other branches of the industry depending on silk 10 per cent of their production so that in view of this rayon manufacturers began to figure on 7 per cent for the hosiery industry and 3 per cent for other trades such as necktie manufacturers and woven goods producers. This drastic action came just at the time when rayon yarn manufacturers were unable to supply their regular customers with enough yarn so that the silk situation has brought them face to face with their greatest merchandising job.

Worsted Yarns

It is a sellers' market in worsted knitting yarns and outerwear manufacturers are willing to buy many times the quantity of yarn that spinners will sell them. There have been no decided changes in prices over the month, quotations being well stabilized but at what is considered in normal times a high price. For example 2/20s, 50s are quoted around $1.57½ and in normal times resistance was shown when this count got much above the dollar mark. At present many manufacturers are using substitute yarns composed of cotton, rayon and mohair which may be mixed with a percentage of wool as a means of cutting the price of the garment. The Wool Labeling Law which went into effect a month ago has had no visible effect as yet on the use of substitute yarns in the manufacture of various types of outerwear.

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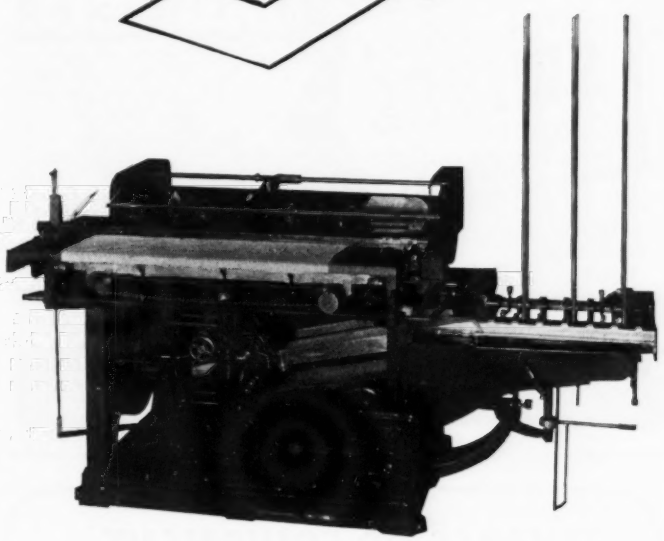

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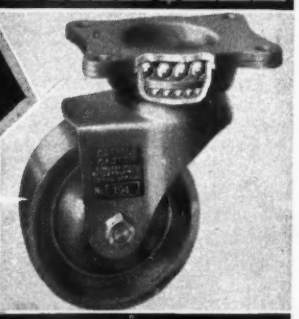

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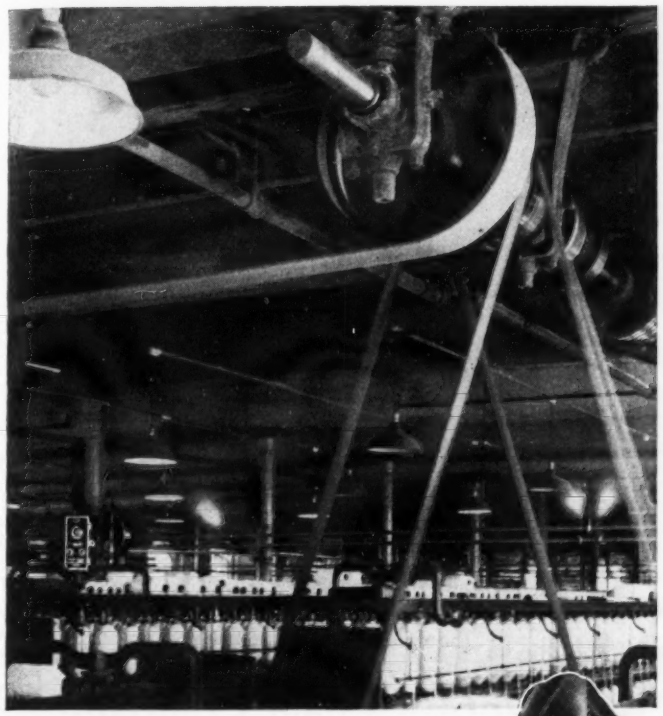

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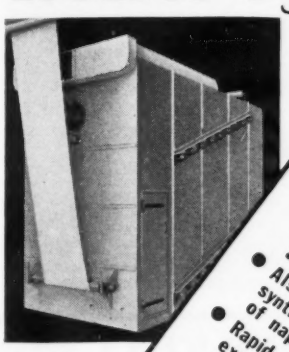

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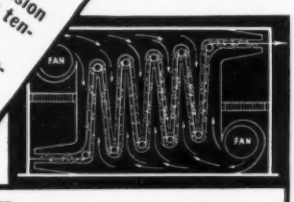

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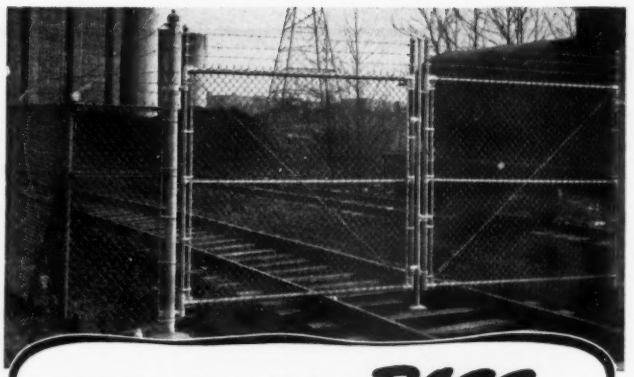

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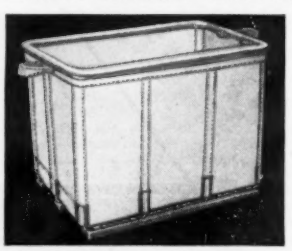

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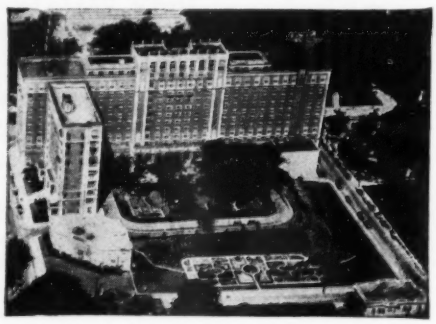

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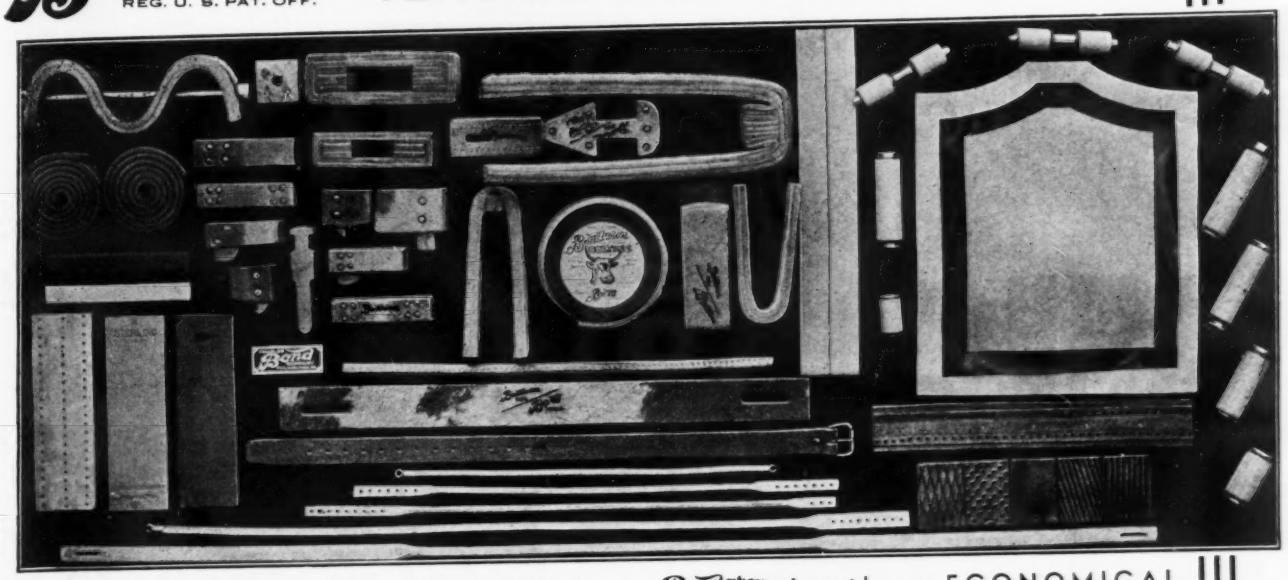

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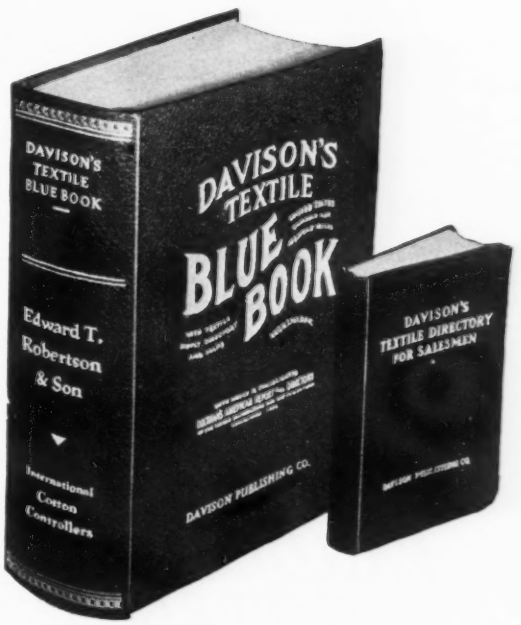
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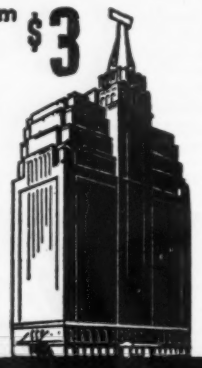

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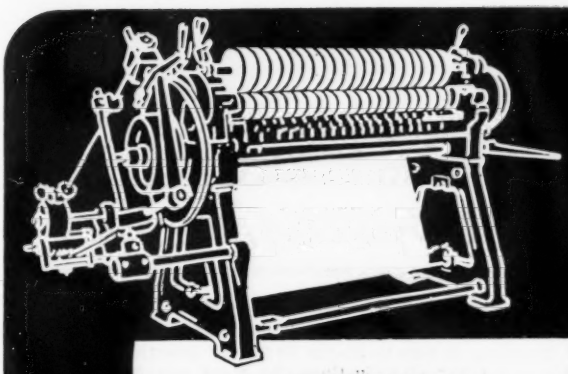

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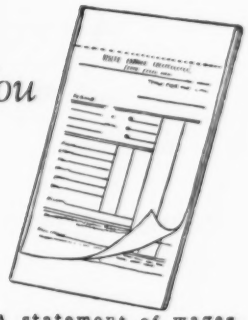

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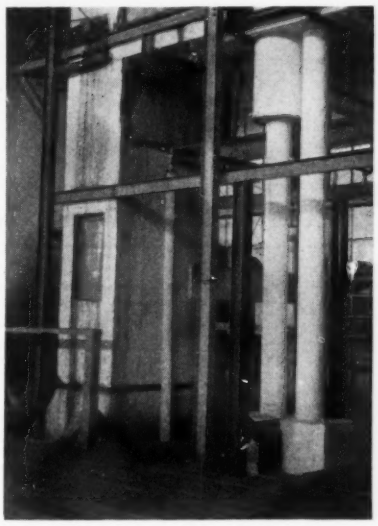

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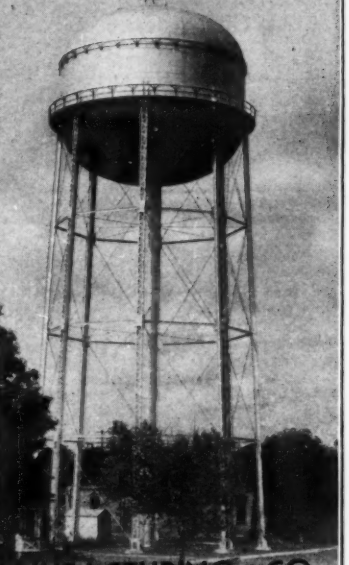

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ADVERTISER'S INDEX

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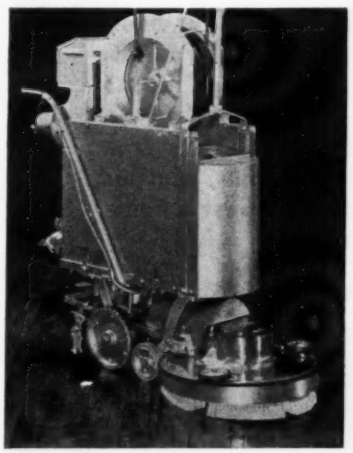

ONE OF THE 49

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★ Carries Weight Into the Fabric
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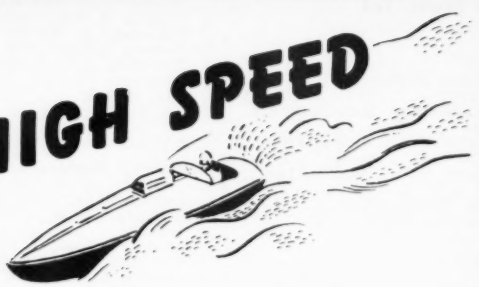
US

HIGH SPEED



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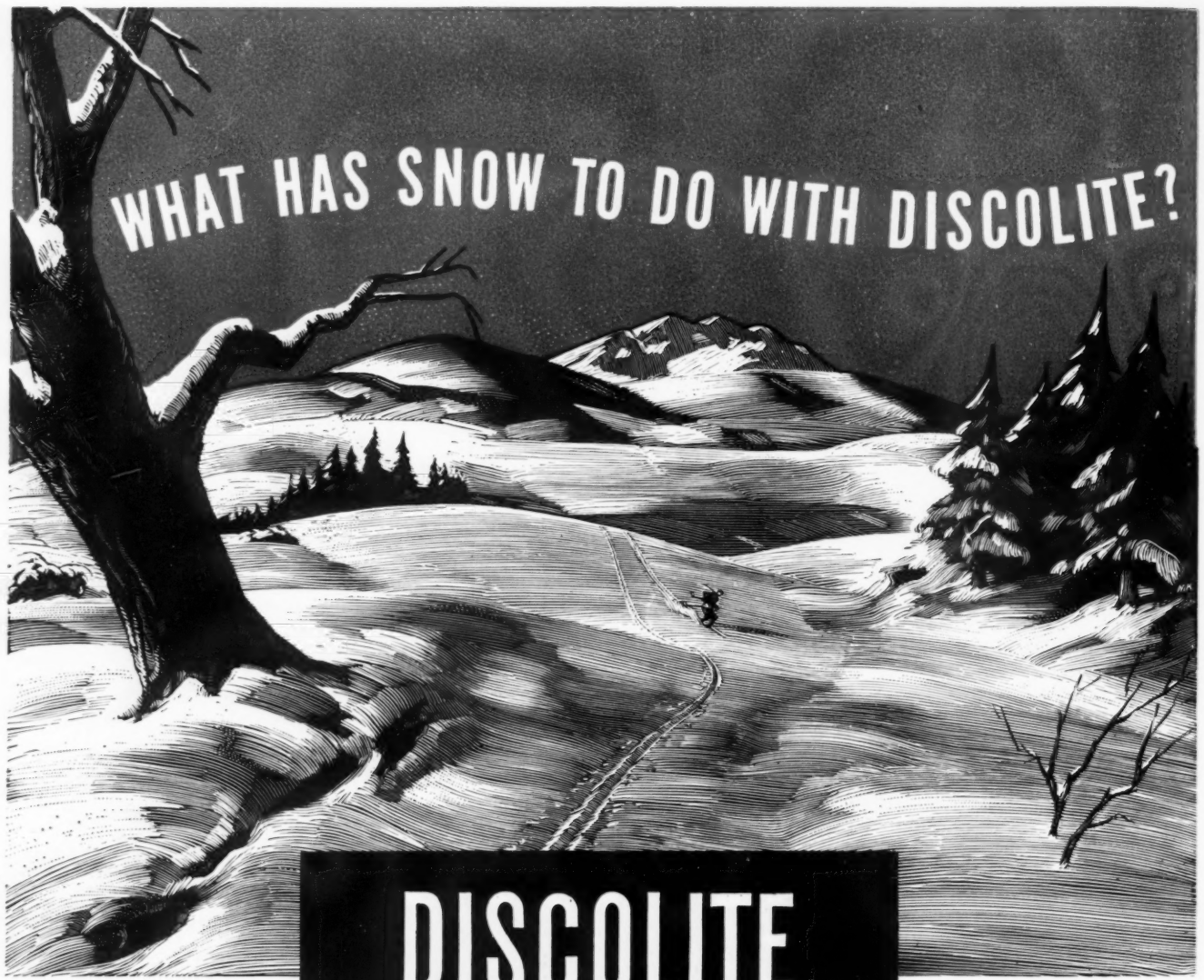

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SODIUM SULPHOXYLATE FORMALDEHYDE

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